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HELMINTHOLOGICAL ABSTRACTS

incorporating
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For the Year 1937.



IMPERIAL BUREAU OF AGRICULTURAL PARASITOLOGY
(HELMINTHOLOGY)

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HELMINTHOLOGICAL ABSTRACTS



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FOR THE YEAR 1937.

Vol. VI, Part 5.

408—Állatorvosi Lapok.

- a. SIMA, I., 1937.—“A *Taenia* és *Cysticercus pisiformis* elleni immunitás.” 60 (1), 1-4.

(408a) Sima infects rabbits with *Cysticercus pisiformis* and finds that they are immune to further infection. This immunity can be passively transferred to other rabbits by means of injections of immune serum but it is not passed to the young through the placenta or milk. He has obtained positive intradermal reactions in infected rabbits, using an antigen made from either adult tapeworm material or from cysticerci. It was not possible to induce passively a resistance in dogs to the adult worm. The presence of *Taenia pisiformis* brings about an immunity to *Taenia hydatigena*. P.A.C.

409—Állattani Közlemények.

- a. SOÓS, A., 1937.—“Magyarország mohában élő fonálférgeiről. II.” 34 (1/2), 42-46. [German summary p. 45.]

(409a) In this second part [for Part I see Helm. Abs., Vol. VI, No. 417a] of his study of moss-inhabiting nematodes in Hungary, Soós enumerates 13 species, 5 of which are new records for Hungary. *Dorylaimus paraobtusicaudatus* was observed for the first time since the species was described. A.E.F.

410—American Journal of Cancer.

- a. BULLOCK, F. D., CURTIS, M. R. & DUNNING, W. F., 1937.—“A transplantable metastasizing cysticercus plasmoma of the rat's liver associated with multiple subcutaneous benzpyrene sarcomata.” 30 (2), 355-361.

411—American Journal of Diseases of Children.

- a. WRIGHT, W. H. & CRAM, E. B., 1937.—“Studies on oxyuriasis. IV. Some aspects of the problem of therapy.” 54 (6), 1276-1284.

(411a) No drug, sufficiently safe, will remove all the oxyuris worms from a patient in a single dose. Tetrachlorethylene came closest to the ideal. Oxyuriasis is frequently a family infection and this necessitates the simultaneous treatment of every member. The use of enemas and of anal plugs and ointments are useful aids but cannot be depended on to eradicate an infection. R.T.L.

412—American Journal of Roentgenology and Radium Therapy.

- a. SEMRAD, J. E., 1937.—“Effects of roentgen irradiation on trichinosis in the albino rat.” 38 (3), 470-477.

413—American Midland Naturalist.

- a. MUELLER, J. F., 1937.—“Further studies on North American Gyrodactyloidea.” 18 (2), 207-219.
 b. MIZELLE, J. D., 1937.—“Ectoparasites of the blunt-nosed minnow (*Hyborhynchus notatus*).” 18 (4), 612-621.
 c. COATNEY, G. R. & ROUDABUSH, R. L., 1937.—“Some blood parasites from Nebraska birds.” 18 (6), 1005-1030.

414—American Museum Novitates.

- a. STUNKARD, H. W., 1937.—“The physiology, life cycles and phylogeny of the parasitic flatworms.” No. 908, 27 pp.

(414a) Stunkard develops a new concept of the phylogeny of the Platyhelminthes, considering it almost certain that members of the phylum became parasites of invertebrates in early geologic time. He believes it probable that the Mesozoa are survivors from that early association. The cestodes and digenetic trematodes may also be traced back to the same period, but have added vertebrate hosts in their life cycles and become more successful. Other commensal and parasitic groups have developed later, e.g., the Temnocephala chiefly on fresh-water invertebrates, and the Monogenea chiefly on marine vertebrates. All the forms are derived from a hypothetical, generalized, planula-like ancestor, the Mesozoa showing only those changes due to a long period of parasitism. The miracidia of the Digenea and the ciliated larvae of the Monogenea can also be compared with the ancestral type. The phylogenetic plan outlined by Bresslau & Reisinger in the Handbuch der Zoologie is commended, but the derivation of the cestodes from the trematodes is criticized as unlikely in view of the already high specialization of the latter.

E.M.S.

415—Anales de la Facultad de Ciencias Médicas. Buenos Aires.

- *a. ROSSI, R. & LOZANO, F. S., 1937.—“Pneumoquiste y abscesos miliares de hígado.” 2, 79-91.

416—Anales de la Facultad de Ciencias Médicas de La Plata.

- *a. CIEZA RODRÍGUEZ, M., 1937.—“Quiste hidático primitivo del fondo de saco de Douglas, recidivado ‘in situ’.” 1, 125-131.
 *b. GREENWAY, D., 1937.—“Consideraciones sobre la parasitosis intestinal humana en La Plata.” 1, 143-145.

417—Annaes da Academia Brasileira de Sciencias.

- a. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1937.—“Sur deux genres de Heligmosominae (Nematoda: Strongyloidea).” 9 (1), 41-47.
 b. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1937.—“Especies de *Capillaria* em Cuba. (Nematoda: Trichuroidea).” 9 (2), 91-97.

* Original not available for checking or abstracting.

(417a) Freitas & Lent describe *Heligmoskrjabinia skrjabini* n. g., n. sp. from the small intestine of *Agouti paca*. This new genus is closely related to *Oswaldonema*, a genus also parasitizing *Agouti paca*. There are important differences, however, in the asymmetric bursa, particularly in the right lobe where the ventro-ventral ray is short in the new genus and the laterals run parallel to each other. The dorsal ray bifurcates and the left branch proceeds to divide into 3 branches terminating in a characteristic manner. P.A.C.

(417b) The following species of *Capillaria* from Cuba are described and figured: *Capillaria collaris* from *Gallus gallus dom.*; *C. columbae* from *Columba livia dom.*; *C. pérezi* from *Anhinga anhinga*; *C. viguerasi* n. sp. from *Otopterus waterhousei minor* and *C. cubana* n. sp. from *Artibeus jamaicensis parvipes*. R.T.L.

418—Annaes da Faculdade de Medicina da Universidade de São Paulo.

- a. PESSÔA, S. B. & PASCALE, H., 1937.—“Pesquisas sobre a ancylostomose em São Paulo. III. Intensidade da ancylostomose em algumas fazendas de café no município de Ribeirão Preto.” 13, 167-180. [English summary pp. 176-179.]
- b. PESSÔA, S. B. & PASCALE, H., 1937.—“Pesquisas sobre a ancylostomose em São Paulo. IV. Análise da infestação pelo *Necator* em uma fazenda de café e canna no município de Sertãozinho.” 13, 181-210. [English summary pp. 208-209.]

419—Annaes Paulistas de Medicina e Cirurgia.

- a. PESSÔA, S. B. & PASCALE, H., 1937.—“Pesquisas sobre a ancylostomose em S. Paulo. II. Tratamento da ancylostomose pelo tetrachloretyleno.” 34 (5), 429-432, 435-439.

420—Annales de l'École Supérieure de Médecine et de Pharmacie de l'Indochine, 1935-1937.

- a. GALLIARD, H., 1937.—“Contribution à l'étude de la filariose humaine à *Filaria malayi* et *Filaria bancrofti* au Tonkin.” 1, 53-62.
- b. KELLER, 1937.—“Sur une nouvelle méthode de traitement de la sparganose oculaire.” 1, 77-89.

(420a) Galliard records *F. malayi* in Tonkin. From a comparison of the present-day incidence of filariasis (*F. malayi* and *F. bancrofti*) with the records of Mathis & Leger (1911) it appears that filariasis has not increased in Tonkin during the past 26 years. The incidence of the 2 species in different areas is as follows: in the delta, of 1,121 examined, 5.1% had *F. malayi* and 2.2% had *F. bancrofti*; in the middle region, of 251 examined, 1.2% *F. malayi* and 1.6% *F. bancrofti*; in the upper region, 0.4% *F. malayi* and 3.3% *F. bancrofti*. Taken as a whole, the number of cases of *F. malayi* is about twice those of *F. bancrofti*. J.J.C.B.

421—Annales de la Faculté Française de Médecine et de Pharmacie de Beyrouth.

- *a. MAÎTRERObERT & DOPF, 1937.—“Un cas d'onchocercose chez un indigène de la Haute-Volta.” 6, 51-52.
- *b. JABRE, E. & ISRAEL, A. H., 1937.—“Kyste hydatique paramédiastinal et pulmonaire (à propos d'un cas opéré et guéri).” 6, 179-189.

422—Annales Médico-Psychologiques.

- a. LAIGNEL-LAVASTINE, GALLOT, H. M., D'HEUCQUEVILLE, G. & MIGNOT, H., 1937.—“Épisode confusionnel au cours d'une échinococcose hépatique avec essaimage péritonéal.” Année 95, 2 (1), 87-91.

423—Annales de la Société Belge de Médecine Tropicale.

- a. COCHAUX, I., 1937.—“Helminthiases associées aux avitaminoses.—Le nzadi ou lupusu des indigènes du Kasai.” 17 (4), 491-500.
- b. SCHWETZ, J. & DARTEVELDE, E., 1937.—“Sur les mollusques gastéropodes d'eau douce trouvés dans plusieurs localités du Bas-Congo et du Kwango.” 17 (4), 565-576.
- c. WYMEERSCH, H. M. O. VAN, 1937.—“Note concernant l'emploi de l'Entelmintina dans le traitement de l'ankylostomiase grave.” 17 (4), 583-587.
- d. WYMEERSCH, H. M. O. VAN, 1937.—“Note complémentaire concernant l'emploi de l'Entelmintina dans le traitement de l'ankylostomiase.” 17 (4), 589-596.

(423a) Cochaux describes “Nzadi” or “Lupussu,” a syndrome of physical deficiencies occurring in parts of Africa. It is usually fatal and is caused by an association of one or more avitaminoses with an intense infection with ascarids or hookworm. The symptoms may vary within fairly wide limits; treatment is described as needing extreme care, while for prevention the usual methods directed against establishment of helminthic diseases, together with a good mixed diet are recommended. P.A.C.

(423b) A survey of the molluscan fauna of Bas-Congo and Haut-Kwango shows that *Limnaea natalensis* is by far the most common freshwater form. *Physopsis africana*, *Bulinus* (*Pyrgophysa*) *forskali* and *Planorbis boissyi* were rare. In two foci of human bilharziasis, one vesical the other intestinal, *Limnaea natalensis* was practically the only species present, but in a third focus of vesical type *Limnaea* spp. did not occur and *Planorbis*, *Segmentina* and *Bulinus* were scarce. The authors suggest that the rôle of *L. natalensis* as a carrier of the two species of Bilharzia worm in the Lower Congo should be studied further. R.T.L.

(423c) Wymeersch reports on the successful treatment of ancylostomiasis with Entelmintina, a compound containing aspidinol-filicic acid. The drug is of particular value in countries where ancylostomiasis is widespread, as it is sufficiently non-toxic to allow of its administration by native assistants. K.S.

(423d) Wymeersch reports on 23 more cases of severe ancylostomiasis, mostly in children, which he has successfully treated with Entelmintina. In each case complete health was restored. The drug proved ineffective against *Ascaris* and *Strongyloides*. Lubala chalk was inefficacious in the treatment of both ancylostomes and *Ascaris*. K.S.

* Original not available for checking or abstracting.

424—Annali Italiani di Chirurgia.

- a. POLICHETTI, E., 1937.—“Ascaridiosi chirurgica: le larve nella genesi della peritonite acuta senza perforazione intestinale e azione perforativa sull'intestino del verme adulto.” 16 (1), 69-83.

425—Annotationes Zoologicae Japonenses.

- a. OKABE, K., 1937.—“On the life history of a frog trematode, *Loxogenes liberum* Seno.” 16 (1), 42-52.

426—Anzeiger für Schädlingskunde.

- a. KOTTHOFF, P., 1937.—“Für Deutschland neue Wirtspflanzen der *Anguillulina dipsaci* (Kühn).” 13 (5), 60-63.

(426a) Kotthoff gives a brief account of the disease symptoms shown by hemp, carrots and cucumber plants attacked by the stem eelworm *Anguillulina dipsaci*. All three are new hosts for this parasite in Germany.

T.G.

427—Archiv für Entwicklungsmechanik der Organismen.

- a. SECK, P., 1937.—“Zur Entwicklungsmechanik des Essigälchens.” 137 (1), 57-85.

428—Archiv für Experimentelle Zellforschung.

- a. COLLIER, JR., V., 1937.—“The cytoplasmic components in the fertilization of *Ascaris*.” 19 (2/4), 222-227.

429—Archiv für Geschichte der Medizin und der Naturwissenschaften.

- a. MEIER, K., 1937.—“Über den Medina-Wurm.” 30 (1/2), 69-77.

430—Archiv für Hydrobiologie. Supplement-Band.

- a. ZELLER, A., 1937.—“Über zwei neue Nematodengallen an Wasserpflanzen.” 15 (2), 385-391.

(430a) Zeller describes and figures the pathological conditions set up in 2 aquatic plants, *Myriophyllum spicatum* and *Potamogeton malayanus*, by the eelworm *Tylenchus dipsaci* var. *tombaensis* [see Helm. Abs., Vol. VI, No. 7a]. He also reports damage by eelworms in the buds of another aquatic plant, *Helodea*, collected in the neighbourhood of Vienna. These eelworms have been examined by Dr. Schneider of Krefeld and placed in the subgenus *Chitinoaphelenchus*.

T.G.

431—Archiv für Klinische Chirurgie.

- a. TOOLE, H., 1937.—“Die Echinokokkenkrankheit in Griechenland.” 188, 459-465.
b. AIGA, Y., 1937.—“Über Ascariden in den Gallenwegen.” 188, 600-617.

432—Archiv für Wissenschaftliche und Praktische Tierheilkunde.

- a. HEIDEGGER, E., 1937.—“*Libellula brunnea* Fonsc. und *Platycnemis pennipes* Pall., zwei neue Hilfswirte der Eileitertegel der Hühner.” 72, 224-229.

(432a) Heidegger has found that two species of dragon flies can act as intermediate hosts of *Prosthogonimus*, which lives in the oviduct of the domestic fowl. Of 200 specimens of *Libellula brunnea* examined, 160 carried cercariae. Some carried only one or a few cysts but many had a massive infection of 50 or 60 cysts. *Platycnemis pennipes* can also act as a vector but rarely carries more than a single cyst, never more than two. P.A.C.

433—Archives of Internal Medicine.

- a. GODFREY, M. F., 1937.—“Hydatid disease: clinical, laboratory and roentgenographic observations.” 60 (5), 783-804.

434—Archives Internationales de Pharmacodynamie et de Thérapie.

- a. GOMES DA COSTA, S. F. & RAYMOND-HAMET, 1937.—“Action anthelminthique de l'harmaline.” 56, 314-318.

(434a) Gomes da Costa & Raymond-Hamet review all previous work on harmine and harmaline, two alkaloids obtained from *Peganum Harmala*. They show that *in vitro* harmine has a higher toxicity than harmaline for *Ascaris lumbricoides*, *Taenia serrata* and *T. saginata*. K.S.

435—Archives des Maladies de l'Appareil Digestif et des Maladies de la Nutrition.

- a. LOEPER, M. & BROUET-SAINTON, J., 1937.—“Les kystes hydatiques calcifiés du foie.” 27 (6), 585-613.

436—Archives de Médecine des Enfants.

- a. BONABA, J. & SOTO, J., 1937.—“Un cas de pneumokyste périvésiculaire. Premier temps de l'ouverture proprement dite du kyste hydatique du poumon.” 40 (12), 795-802.

437—Archives d'Ophthalmologie.

- a. KELLER, M., 1937.—“Note sur une nouvelle méthode de traitement de la sparganose oculaire.” Nouvelle série, 1 (9), 779-790.
b. MARBAIX & APPELMANS, 1937.—“Kératite d'origine filarienne.” Nouvelle série, 1 (11), 978-984.

438—Archives of Ophthalmology.

- a. CALHOUN, F. P., 1937.—“Intra-ocular invasion by the larva of the ascaris. Report of a case with unusual complications.” 18 (6), 963-970.

439—Archives de la Société des Sciences Médicales et Biologiques de Montpellier.

- a. LEENHARDT, BOUCOMONT & BALMÈS, J., 1937.—“A propos du diagnostic des kystes hydatiques du poumon chez l'enfant: trois observations (forme typique, forme pieurétique avec phénomène de choc hydatique à la ponction, forme latente avec toxicité enclose).” 18 (8), 421-426.

440—Archivio Italiano di Chirurgia.

- a. CAVINA, G., 1937.—“Echinococco calcificato della coda del pancreas.” 46 (5), 511-514.
- b. MARCUCCI, G., 1937.—“Ricerche isto-patologiche su undici milze ectomizzate per epato-splenomegalia egiziana.” 46 (6), 555-570.

(440b) Marcucci has studied the histopathology of 11 ectomized spleens from cases of Egyptian splenomegaly. The cases were relatively early, before the onset of marked liver cirrhosis or ascites, and Marcucci concludes that early splenectomy is advisable in order to avoid cirrhosis. Nevertheless there is no close correlation between the condition of the spleen and the onset of cirrhosis.

B.G.P.

441—Archivio di Ostetricia e Ginecologia.

- a. RUSSO, F., 1937.—“Sull'anchilostomiasi in gravidanza.” Anno 1937, 1 (3), 226-239.

442—Archivos do Instituto Biologico.

- a. PEREIRA, C., 1937.—“*Rhabditis hambletoni* n. sp., nema aparentemente semiparassito da ‘bróca do algodoeiro’ (*Gasterocercodes brasiliensis*).” 8, 215-230. [English summary p. 230.]

(442a) Pereira describes and figures a rare nematode, tentatively placed in the genus *Rhabditis*, which is semi-parasitic in the larvae of the cotton-borer beetle, *Gasterocercodes brasiliensis*. The worms, which are not amenable to cultivation on artificial media, appear to invade only those beetle larvae which are in a state of reduced vitality. Details are given of the life-cycle which is heterogonic.

T.G.

443—Archivos de Medicina Infantil.

- a. VAZQUEZ PAUSA, A., 1937.—“Tratamiento de la tricocéfalo por el citrato de hierro y amonio a altas dosis.” 6 (4), 469-470.

(443a) Having treated some 300 cases of trichuriasis with daily doses of 4 to 6 g. of citrate of iron and ammonium, Vazquez Pausa has found that 90% of cases are cured after 10 to 15 days, as judged by disappearance of eggs in the faeces. The high doses are well tolerated and have a beneficial concomitant effect on the anaemia which is often secondary to this infection.

B.G.P.

444—Archivos de Medicina Interna.

- *a. CASTILLO, P. A. & SALA PANISELLO, F., 1937.—“*Ascárides lumbricoides* en la vías biliares.” 3, 279-301.

445—Archivos de Pediatría del Uruguay.

- a. CANTONNET BLANCH, P., CHARLONE, R. & BARBEROUSSE, C. M., 1937.—“Valor diagnóstico del neumoquiste perivesicular.” 8 (6), 387-394.

* Original not available for checking or abstracting.

446—Archivos Uruguayos de Medicina, Cirugía y Especialidades.

- a. CHIFFLET, A. & PURRIEL, P., 1937.—“El neumoquiste perivesicular.” 11 (6), 639-651.
- b. CHIFFLET, A., 1937.—“La eosinofilia costal en el quiste hidático del pulmón. Nota preliminar.” 11 (6), 655-656.
- c. PIAGGIO-BLANCO, R. A. & GARCÍA-CAPURRO, F., 1937.—“Hidatido-peritoneo. Consideraciones sobre su diagnóstico por la punción y el neumoperitoneo.” 11 (6), 657-672.
- d. OTERO, J. P., 1937.—“Pio-neumo-quiste hidático del hígado.” 11 (6), 682-699.

447—Arquivos do Instituto Penido Burnier.

- *a. ALMEIDA, A. DE & MONTEIRO SALES, 1937.—“Considerações sobre a cisticercose ocular.” 4, 314-319.

448—Atti del Reale Istituto Veneto di Scienze, Lettere ed Arti.
2. Scienze Matematiche e Naturali.

- a. POMINI, F., 1937.—“Lo sviluppo normale delle uova di *Ascaris megalocephala* e gli effetti micromorfologici delle radium-radiazioni studiati microcinematograficamente.” 96, 219-227.

(448a) Pomini has exposed eggs of *Ascaris megalocephala* to radium irradiation and observed the resulting cytological changes. These include a slowing down of the refractive granules in the cytoplasm, and a displacement of them after the first division to the poles. Segmentation is retarded and abnormal. There is pseudopodial activity in the equatorial region which ceases after a while, only to reappear later. He is unable to find a cause for these phenomena.

P.A.C.

449—Australian Journal of Experimental Biology and Medical Science.

- a. ROBERTS, F. H. S., 1937.—“Studies on the life history and economic importance of *Heterakis gallinae* (Gmelin, 1790 Freeborn, 1923), the caecum worm of fowls.” 15 (4), 429-439.

(449a) Roberts has examined the life-history of *Heterakis gallinae*, which occurs in nearly 90% of the fowls of the Brisbane district. Eggs may become infective in 5 days under optimum conditions of temperature, there being one moult, on the 4th day, in this stage. Three more moults occur within the body of the host. He finds the young larvae invade the epithelium of the glandular crypts during the first four days of parasitic life and occasional worms may be recovered from the lymph glands. Many of these birds became infected with blackhead through the agency of the *Heterakis* eggs, and Roberts found that in severe cases the development of the *Heterakis* was retarded, and a higher percentage than usual of the larvae tends to be eliminated in severe cases of blackhead. *Heterakis gallinae*, except as a blackhead carrier, is not generally very harmful to the host unless present in very large numbers.

P.A.C.

* Original not available for checking or abstracting.

450—Australian and New Zealand Journal of Surgery.

- a. MASON, A. J. & BARNETT, L. E., 1937.—“Spontaneous evacuation of a hydatid cyst of the liver by way of the bile ducts.” 7 (1), 78-80.

451—Australian Veterinary Journal.

- a. GRAHAM, N. P. H., 1937.—“Observations on the enema treatment for *Oesophagostomum columbianum*.” 13 (6), 252-254.

(451a) Graham records the treatment of a flock of sheep heavily infected with *Oesophagostomum columbianum* by an enema containing 2 grains of sodium arsenite per quart of water. After 21 months the group given the full dose and moved to a clean pasture was still comparatively free from infection. The other group treated 7 months later with about half the correct dose did not show such a great degree of success, a large percentage being infected and a fair number of their lambs having picked up infection.

J.W.G.L.

452—Beiträge zur Klinischen Chirurgie.

- a. RIVOIR, J., 1937.—“Ein Beitrag zur Kenntnis des Nierenechinokokkus und ein Fall von doppelseitigem Nierenechinokokkus.” 166 (1), 96-100.

453—Biological Bulletin.

- a. ODLAUG, T. O., 1937.—“Notes on the development of *Gorgodera ampicava* in the final host.” 72 (1), 80-87.

454—Biologisch Jaarboek.

- a. CONINCK, L. A. P. DE, 1937.—“Sur le male de *Xennella suecica* Allgén 1935 (Nematodes), ainsi que sur la position systématique du genre *Xennella* Cobb 1920.” 4, 378-387.

(454a) de Coninck describes and figures for the first time the male of the marine nematode *Xennella suecica* Allgén, from material obtained from the coast of Sardinia. The female only of this species was previously known from the Öresund, Sweden. He discusses the systematic relationship of the genus *Xennella*.

T.G.

455—Boletim Biológico.

- a. ANON, 1937.—“Notas sobre parasitismo em biologia.” 3 (5), 29-35.

(455a) The extent and origin of parasitism, the types of life-history found among parasites, and the effects of parasite and host one on the other are briefly discussed in this anonymous article.

B.G.P.

456—Boletín de la Academia Nacional de Medicina de Buenos Aires.

- *a. CASTEX, M. R. & GREENWAY, D., 1937.—“Distomatosis hepática con ejemplar errático eliminado por uretra.” pp. 461-464.

* Original not available for checking or abstracting.

457—Boletín de la Sociedad Cubana de Pediatría.

- a. CASTELLANOS, A., VÁZQUEZ PAUSSA, A. & PAUSSA TRUJILLO, J., 1937.—“El hierro a altas dosis en el tratamiento de las tricocefalosis.” 9 (10), 425-436.

458—Boletines y Trabajos de la Sociedad de Cirugía de Buenos Aires.

- a. RUIZ MORENA, M., LAGOS GARCÍA, A. & LASCANO GONZÁLEZ, J. C., 1937.—“Quiste hidático libre experimental en la cavidad abdominal.” 21 (5), 151-162.
- b. CALCAGNO, B. N. & MANFREDI, F. J., 1937.—“Quiste hidático del pulmón con pleura libre en un niño; operación en un tiempo con neumotórax previo. Curación.” 21 (5), 162-168.
- c. ARCE, J., 1937.—“Quistes hidáticos calcificados del hígado. (Consideraciones sobre tratamiento).” 21 (8), 255-277.
- d. IVANISSEVICH, O. & FERRARI, R. C., 1937.—“Diagnóstico radiológico de los quistes hidáticos del pulmón.” 21 (13), 467-479.
- e. LANDÍVAR, A. F. & LEONI IPARRAGUIRRE, C. A., 1937.—“Pioneumoquiste hidático primitivo del hígado.” 21 (16), 556-569.
- f. CAEIRO, J. A., 1937.—“Quiste hidático calcificado del riñón abierto en pelvis renal.” 21 (18), 617-627.
- g. PINO, 1937.—“Diagnóstico radiológico de quiste hidático del pulmón.” 21 (19), 645-650.
- h. CALCAGNO, B. N., VIVOLI, D. & CORBELL, E. G., 1937.—“Quiste hidático caseoso calcificado del hígado.” 21 (19), 660-671.
- i. REYES, JR., M. 1937.—“Quiste hidático de pulmón derecho, operación en dos tiempos, muerte por hemorragia fulminante.” 21 (30), 1083-1089.

459—Botany and Zoology.

- a. SYÔGAKI, Y., 1937.—“Corrections on the scientific names of worms used in the Nippon-Dobûtu-Zukan.” 5 (1), 126-130. [In Japanese.]
- b. FUJITA, T., 1937.—“On nematodes parasitic to *Onchorhynchus* (salmon) of the North Pacific Ocean.” 5 (9), 1625-1634. [In Japanese.]

460—Brain.

- a. GREENFIELD, J. G. & PRITCHARD, B., 1937.—“Cerebral infection with *Schistosoma japonicum*.” 60 (3), 361-372.

(460a) In two cases focal epileptic attacks suggesting the presence of a cerebral tumour are shown to be due to cerebral infection with the eggs of *Schistosoma japonicum*. The only previous instance on record is that by Tsunada and Shimamura in 1906.

R.T.L.

461—Brasil-Medico.

- a. GÖBEL, E. F., 1937.—“A toxicologia do extracto de timbó e rotenona e sua applicação na medicina humana e veterinaria.” 51 (43), 1072-1073.

(461a) Writing as an industrial chemist, Göbel discusses the toxicity of extracts of “Timbó,” a name covering shrubs and lianas of the genus *Lonchocarpus*, indigenous to northern Brazil. The roots of these plants, extracted preferably with organic chlorides, yield the active principle

Rotenone which is allied to the active principle of Derris root and has the formula $C_{23}H_{22}O_6$. In its action on fish, Rotenone is 700 times as toxic as nicotine. A 0.02% solution in water of Timbó extract (30% Rotenone) is lethal to *Oxyuris* and *Ascaris* [*in vitro*, apparently]. Tests of toxicity of Timbó extract to young dogs show that 0.125 g. per kg. body-weight is a dose well tolerated, and preliminary tests in man suggest that doses well below the toxic limit may have considerable anthelmintic effect.

B.G.P.

462—Bratislavské Lekárske Listy.

- a. MURIN, J., 1937.—“Chirurgická liečba echinokokka pľúc a pohrudnice.” 17 (10), 684-687. [French, German & English summaries.]

(462a) [Surgical treatment of the lung and pleural echinococcus.]

463—Buletinul Muzeului Național de Istorie Naturală din Chișinău.

- *a. FLORESCU, B., 1937.—“Le cycle évolutif de *Polymorphus minutus* Goeze en Roumanie (Acanthocephala).” 7, 61-69.

464—Bulletin de l'Académie de Médecine de Roumanie.

- a. NICOLESCO, P., STRAT, C. & IAMANDI, 1937.—“Diagnostic étiologique de la septicémie trichinosique.” 4 (5), 585-589.

(464a) Since the diagnosis of trichinosis by blood counts, biopsies, and clinical features may be uncertain or difficult to perform, it is urged that the blood be examined in all suspected cases for migratory larvae by the method of Staubli; 10 c.c. of venous blood is laked in 100 c.c. of 30% acetic acid, centrifuged, and the deposit examined for larvae.

V.D.V.S.

465—Bulletin de l'Académie des Sciences de l'URSS. Classe des Sciences Mathématiques et Naturelles. Série Biologique.

- a. BYCHOWSKY, B. E., 1937.—“Ontogenese und phylogenetische Beziehungen der parasitischen Plathelminthes.” 1937, pp. 1353-1383. [In Russian: German summary p. 1382.]

(465a) Holding that ontogeny should ultimately point the way to a natural system of phylogeny, Bychowsky presents an entirely new classification of the parasitic Platyhelminthes. Broadly, he claims that there have been two divergent developments from a common ancestral rhabdocoelid stock: (i) the digenetic trematodes, and (ii) the superclass CERCOMEROMORPHAE comprising:

Subsuperclass: MONOGENOIDEI n. sscl.

Class: MONOGENOIDEA

GYROCOTYLOIDEA n. cl. (removed from the Cestoidea)

CESTOIDEI n. sscl.

Class: CESTOIDEA

Subclass: CESTODARIA

CESTODA

* Original not available for checking or abstracting.

The holdfast of Monogenoidea is held to be homologous with the posterior part of the onchosphere and with the cercomer of Cestoidea. In the earlier part of the paper the Monogenoidea are reclassified in detail, numerous new group names being introduced. B.G.P.

466—Bulletin de l'Académie Vétérinaire de France.

- a. URBAIN, A., NOUVEL, J. & PASQUIER, M. A., 1937.—“Au sujet de quelques nématodes, parasites d'animaux sauvages.” 10, 46-47.
- b. BALOZET, L., 1937.—“Rôle pathogène de *Brachylaemus suis*.” 10, 171-175.

(466a) Urbain, Nouvel & Pasquier comment on the fact that wild animals kept in captivity harbour comparatively few helminths. From a zoological garden at Vincennes they have, however, seen the following cases of parasitism. A lion, *Felis leo*, spontaneously eliminated 250 to 300 *Toxascaris leonina*. Postmortem examination showed *Rhea americana* to be infested with *Dicheilonema rhaeae*, occurring in the lungs. A goose, *Branta canadensis*, harboured *Heterakis circumvallata*, this being a new host record. *Diplotrriaena ozouxi* was recovered from the peritoneal cavity of a canary (*Serinus* sp.).

P.A.C.

(466b) Balozet here deals with the pathogenic effects of *Brachylaemus suis* in pigs, a species discovered by him in 1936 in Tunis [see Helm. Abs., Vol. V, Nos. 197a, 308c; Vol. VI, No. 18a]. The snail intermediary, chiefly *Xerophila* spp., aestivates during the dry summer, pigs eating the snails mainly in winter. The flukes occur in the posterior part of the small intestine, often in large numbers, where they appear to suck blood; nevertheless their pathogenic effect is probably slight, local deaths being due to other causes. B.G.P.

467—Bulletin. Animal Health Station, Yeerongpilly, Queensland.

- a. ROBERTS, F. H. S., 1937.—“Studies on the biology and control of the large roundworm of fowls, *Ascaridia galli* (Schränk 1788) Freeborn 1923.” No. 2, 106 pp.

(467a) [This paper is reprinted from the Queensland Agricultural Journal: see Helm. Abs., Vol. V, Nos. 244b & 376a; Vol. VI, No. 50a.]

468—Bulletin de Biologie et de Médecine Expérimentale de l'URSS.

- a. SEMENOV, V. D., 1937.—“Chemistry of the brain under the conditions of helminthic intoxication of the animal.” 4 (2), 169-171.
- b. SEMENOV, V. D., 1937.—“The effect of helminthic toxins upon the chemical composition of animal blood. Residual nitrogen in the cat's blood.” 4 (2), 172-175.

(468b) Semenov concludes from experiments that injections of alcohol extracts of *Ascaris suum*, *Toxocara mystax*, *Dipylidium caninum* and *Taenia taeniaeformis* influence the cat's metabolism, the residual nitrogen content of the blood undergoing a decrease within the first 2 days. Repeated injections of *Taenia* extracts induced a greater decrease than single injections. A.E.F.

469—Bulletin of the Department of Health, Puerto Rico.

- *a. CHAVES, J., 1937.—“Shoes versus other means of controlling uncinariasis.” 1 (5), 88-91.

470—Bulletin de l'Institut Océanographique de Monaco.

- a. TRAWIŃSKI, A., 1937.—“Recherches sur l'infection des poissons par les trichines.” No. 736, 4 pp.

(470a) By feeding infected flesh to fishes of the genera *Sargus* and *Labrus*, Trawiński has determined that adult *Trichinella* develop in the intestine from the 5th to 10th day after infection, but disappear in 20 to 25 days and no muscle invasion takes place. Larvae injected direct into the muscles live for 15 days at the site of injection, but the muscle tissue of fishes is unfavourable for *Trichinella*, due probably to a natural resistance and too low a temperature. V.D.V.S.

471—Bulletin International de l'Académie Polonaise des Sciences et des Lettres. Classe des Sciences Mathématiques et Naturelles. Série B : Sciences Naturelles II.

- a. JANISZEWSKA, J., 1937.—“Trzecie i czwarte stadium larwalne *Contracaecum aduncum* (Rud.) z jelita starni, *Pleuronectes flesus* L.” Year 1937, 2, 11-18.
b. MARKOWSKI, S., 1937.—“Über die Entwicklungsgeschichte und Biologie des Nematoden *Contracaecum aduncum* (Rudolphi 1802).” Year 1937, 2, 227-247.

(471b) *Contracaecum aduncum* (Rud.) is adult in the intestinal lumen of *Zoarces viviparus* and 16 other predatory fishes in Polish territorial waters of the Baltic. Markowski has observed the embryonation of the eggs under various conditions and has traced the life-history through the crustacean first intermediary (*Eurytemora affinis* or *Acartia bifilosa*). A number of plankton-feeding and predatory fishes can serve as second intermediaries. B.G.P.

472—Bulletins et Mémoires de la Société de Radiologie Médicale de France.

- a. JALET, J., 1937.—“Arthrites et filaires.” 25, 448-449.
b. COSTANTINI & LE GÉNISSEL, 1937.—“A propos de ‘l'image de décollement’ du kyste hydatique du poumon.” 25, 727-736.

473—Bulletin Mensuel. Société de Médecine Militaire Française.

- *a. STEFANINI, J., 1937.—“A propos de la cellulite torpide inguinocrurale.” 31, 142-149.
*b. PERRIGNON DE TROYES & DUBOURGUET, 1937.—“Une forme rare d'occlusion intestinale : l'iléus ascaridien, à propos de deux observations.” 31, 514-517.

474—Bulletin de l'Office International des Épipizooties.

- a. SKRIABINE, K. I. & SCHULZ, R. E., 1937.—“La lutte contre les principales helminthoses des chevaux.” 14, 286-317.

* Original not available for checking or abstracting.

(474a) Skriabine & Schulz discuss the method employed by Soviet helminthologists in their struggle against worms in domestic animals. This method, which is referred to as prophylactic dehelminthisation, includes wholesale treatment of stock as well as various prophylactic measures, and has already been elaborated on a large scale against helminths in sheep. In this paper the problem of control in horses is particularly discussed and the pathogenicity, diagnosis, treatment and control of the principal worms in this host are fully dealt with. The authors consider that the example set by the U.S.S.R. in its large scale campaigns against helminths should be followed by other countries. D.O.M.

475—Bulletin de la Société Belge d'Ophtalmologie.

- a. ZANEN, J., 1937.—“Extraction d'une filaire sous-conjonctivale.” No. 74, pp. 66-69.

476—Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord.

- a. SEURAT, G., 1937.—“Sur quelques nematodes de l'estomac des muridés et les réactions qu'ils provoquent.” 28 (7), 428-431.

(476a) Seurat describes the reaction produced by the presence of *Protospirura muris* and *Physaloptera getula* in Muridae in Algiers. When lodged near the pyloric end of the stomach *P. muris* has no reaction, but in the cardiac region it produces a small tumour with a central ulceration portion surrounded by a region of papillomatous hyperplasia. *P. getula* causes considerable hyperplasia of the mucosa and inflammation of the muscular layers, forming a large mass which may reach the size of a pea.

P.A.C.

477—Bulletin de la Société d'Histoire Naturelle des Ardennes.

- a. QUILLATRE, A., 1937.—“Le ténia des poissons.” 31, p. 60.

478—Bulletin de la Société Nationale d'Acclimatation de France.

- a. BAER, J. G., 1937.—“Un cestode nouveau parasite d'un poisson d'ornement.” Année 84 (7/8), 168-173.

(478a) Baer describes *Bothriocephalus musculosus* n. sp. from a fish, *Cichlosoma biocellata*. The external segmentation does not correspond with the internal but the most striking character is the enormous development of the muscular system. The species of *Bothriocephalus* are not always precisely described, but this species seems to be most closely connected with one described briefly by Woodland in 1935 from *Plagoscion squamosissimum*.

P.A.C.

479—Bulletin de la Société Neuchâteloise des Sciences Naturelles.

- a. DUBOIS, G., 1937.—“Les diplostomes de reptiles (Trematoda: Proterodiplostomidae nov. fam.) du Musée de Vienne.” Année 1936, 61, 5-80.

(479a) Dubois here describes the parasites of reptiles collected by Natterer in Brazil and included in the collection of helminths of the

"Naturhistorisches Museum" of Vienna. All the worms are in a new family, the Proterodiplostomidae. New names and combinations are: *Proterodiplostomum tumidulum* n. g., n. sp., *P. longum* (Brandes), *Mesodiplostomum gladiolum* n. g., n. sp., *Prolecithodiplostomum constrictum* n. g., n. sp., *P. cavum* n. sp., *Cystodiplostomum hollyi* n. g., n. sp., *Herpetodiplostomum testudinis* n. g., n. sp., *H. caimancola* (Dollfus), *Ophiidiplostomum spectabile* n. g., n. sp., *Petalodiplostomum ancyloides* n. g., n. sp., *Heterodiplostomum lanceolatum* n. g., n. sp. In the addenda he treats of related forms of non-Brazilian origin, including *Pseudoneodiplostomum* n. g., with 2 species, *P. thomasi* (Dollfus) t. sp. and *P. siamense* (Porier). Among species inquirendae is a diplostome named *medusae* n. sp.

E.M.S.

480—Bulletin de la Société de Pathologie Exotique.

- a. DESCAZEUX, J., 1937.—"De l'élevage du mouton et de certaines maladies des animaux au Chili." 30 (6), 443-447.
- b. MONTESTRUC, E. & BERTRAND, C., 1937.—"Note sur l'étiologie et le traitement de la lymphangite tropicale." 30 (8), 695-698.
- c. JOYEUX, C. & BAER, J., 1937.—"Sur quelques cestodes de Cochinchine." 30 (10), 872-874.
- d. GARIN, C., 1937.—"Un cas d'infestation massive par l'ankylostome duodénal, sans signes cliniques." 30 (10), 874-876.

(480a) Helminth parasites are apparently uncommon in sheep in Chile, for in this account of diseases of sheep in Chile only *Cysticercus tenuicollis* is noted and is said to have been imported by dogs from New Zealand and Australia. *Echinococcus* was not found although a considerable number of animals was examined.

R.T.L.

(480c) Joyeux & Baer record the presence in Cochin-China of *Taenia taeniaeformis* in *Viverra zibetha* and *Felis viverrina*, and *Sparganum mansonii* in *F. viverrina*. They also describe *Raillietina* (*Paroniella*) *ngoci* n. sp., from *Ducula badia griseicapilla*, a columbiform bird. It is distinguished from all other species of *Raillietina* in Columbiformes by the presence of a single egg in each uterine capsule.

P.A.C.

(480d) A French miner who developed a heavy infection of hookworm showed no symptoms, a fact ascribed by Garin to the fact that the infection was recent. The egg-count per slide (concentrated) rose from 1 to 3,942 in eight months, when 302 worms were recovered after treatment with tetrachlorethylene; yet anaemia was very slight (80% haemoglobin) and detectable only by blood examination, and only 1% of the white cells were eosinophiles.

B.G.P.

481—Bulletin de la Société Vaudoise des Sciences Naturelles.

- a. BORNAND, M., 1937.—"Sur quelques affections parasitaires du gibier observées en 1936." 59 (244), 509-514.

(481a) Bornand records *Synthetocaulus rufescens* from chamois and roe-deer, *Trichuris leporis* from hare, *Crenosoma striatum* from hedgehog, *Capillaria entomelas* ova from *Martes abietum*, *Trichuris vulpis* ova from fox, and anoplocephaline ova from marmot. The records pertain mostly to Switzerland and to the year 1936.

B.G.P.

482—Campo. Agricultura, Industria, Commercio. Rio de Janeiro.

- a. ANON, 1937.—“Contribuição ao conhecimento dos Trichostrongylídeos.” 8 (88), p. 32.
- b. GOMES DE MORAES, R., 1937.—“*Spirocerca lupi* (Rudolphi, 1809). e spirocercoze canina em Minas.” 8 (90), 70-71.
- c. PINTO, C. & ALMEIDA, J. LINS DE, 1937.—“Echinococcose ou hydatidose humana e animal especialmente no Brasil.” 8 (86), 41-48, 66; (87), 19-22; (88), 49-54; (90), 50-54; (91), 61-64; (93), 65-69.
- d. GOMES DE MORAES, R., 1937.—“Mais uma observação do *Diocetophyme renale*.” 8 (93), p. 70.

(482a) A concise description is given of *Ornithostrongylus almeidai* n. sp., from the small intestine of *Tinamus major* in Pará, Brazil. *Ornithostrongylus*, *Ornithonema*, *Lutzema* [*Lutznema*], and *Oswaldostrongylus* are held to constitute a homogeneous group for which the subfamily Ornithostrongylinae n. subf., is proposed. [From the nomenclatural aspect, it should be noted that this article is anonymous.] B.G.P.

(482b) Gomes de Moraes gives an illustrated redescription of *Spirocerca lupi* [= *S. sanguinolenta*] based on material from 2 dogs from the state of Minas (Brazil). B.G.P.

483—Časopis Lékařův Českých.

- a. PETRÁČEK, E., 1937.—“Elephantiasis tropica : studie klinická a epidemiologická.” 76 (26), 1208-1215. [English summary pp. 1214-1215.]

484—Cervello. Giornale di Neurologia.

- *a. MARTINI, F., 1937.—“Ascaridiosi e paralisi infantile. Rapporto di condizione favorente o semplice coincidenza?” 16, 161-168.

485—Ceylon Journal of Science. Section B. Zoology and Geology. (Spolia Zeylanica).

- a. BURT, D. R. R., 1937.—“Two new reptilian cestodes of the genus *Proteocephalus* (*Ophiotaenia*).” 20 (2), 157-179.

(485a) Burt reports and describes *Proteocephalus* (*Ophiotaenia*) *phillipsi* n. sp. from the intestine of the Green Pit Viper, *Trimeresurus trigonocephalus*, and *P. (Ophiotaenia) rhabdophidis* n. sp. from the intestine of *Rhabdophis stolatus*. He examines in some detail the systematic arrangement of the family Proteocephalidae, and retains the genus *Proteocephalus* (Weinland) Woodland with *Ophiotaenia* (LaRue) Harwood as synonym. E.M.S.

486—Chirurg.

- a. FRIEDRICH, H., 1937.—“Die Diagnose des *Echinococcus alveolaris* (*multilocularis*), insbesondere die Röntgendiagnose desselben.” 9 (22), 844-849.
- b. PARASKEVAS, M., 1937.—“Zur Vereiterung des Leberechinococcus durch den Eberthsen Typhusbacillus.” 9 (22), 849-852.

* Original not available for checking or abstracting.

487—Clinica Veterinaria.

- a. PUJATTI, P., 1937.—“Ispezione delle carni suine di privata macellazione e diffusione della echinococcosi. Nota statistica.” 60 (3), 157-161.
- b. AMBROSIONI, P., 1937.—“Breve relazione sulle ricerche eseguite negli anni 1935-1936 su materiale patologico del Giardino Zoologico di Roma.” 60 (4), 189-193.
- c. D'AMBROSIO, A., 1937.—“Sui casi di intestino per insaccati infestato dall' *Oesophagostomum radiatum* e relativi criteri di giudizio nell'ispezione sanitaria ed annonaria.” 60 (6), 366-368.
- d. VIANELLO, G., 1937.—“Il problema della distomatosi dei bovini in Lombardia.—Il trattamento della distomatosi dei bovini con l'esacioretano.” 60 (8), 491-506.
- e. PENSO, G. & VIANELLO, G., 1937.—“La calciocianamide nella lotta contro le distomatosi.” 60 (11), 711-715.

(487b) In the course of his report on pathological material from the Rome Zoo, Ambrosioni refers to an unidentified microfilaria measuring 350 to 400 μ by 3.5 to 4.5 μ from the heart blood of the Indian passerine bird, *Amandava amandava*. He also describes a heavy and fatal infection of *Strongyloides stercoralis* [?] in an Orang. B.G.P.

(487c) Discussing the presence of *Oesophagostomum radiatum* nodules in intestines used as sausage skins, d'Ambrosio points out that there is a hygienic as well as an aesthetic objection to such skins, since the nodules constitute points of weakness which may rupture during filling and processing, thus admitting air and the possibility of bacterial contamination. B.G.P.

(487d) In those low-lying regions of Lombardy subjected to continuous or periodical irrigation, fascioliasis is a serious disease of cattle. Vianello finds that the disease is more marked among Dutch breeds than among Alpine breeds. Prophylactic measures directed against the eggs in the dung or against the intermediary are not practicable under local conditions, and Vianello has concentrated upon the treatment of infected animals. Briefly reviewing the chlorinated hydrocarbons, he concluded that hexachlorethane was the most promising. He next perfected a method of casting solid candles composed of this drug (60%) together with vegetable oils and soap, such that the candle would go into solution in water at 37°C. The candles, weighing 40 g. each, are administered in solid form by being placed on the back of the tongue. The drug is well tolerated in doses up to 70 g. per quintal [100 kg.], but 25 g. (i.e., one candle) per ql. is sufficient. The dose must be repeated after some two months. The only serious drawback is that the drug, with its camphor-like smell, is secreted in the milk. B.G.P.

(487e) Referring to a previous article by Vianello, who stated that in the irrigated pastures of Lombardy anthelmintic treatment of infected cattle was the only practicable prophylactic against fluke, Penso here presses the claims of calcium cyanamide as a dressing for pastures in quantities of 2 to 6 quintals per hectare and also as a means of killing molluscs in ditches. The substance not only kills fluke eggs and snails but also is an excellent nitrogenous fertilizer. Vianello, in a postscript, replies that this method is quite out of the question in Lombardy where the so-called marshes are continuously irrigated with flowing water and yield 7 or 8, or even 12, mowings of grass in the year. B.G.P.

488—Comptes Rendus de l'Association des Anatomistes.

- a. JOYEUX, C. & BAER, J. G., 1937.—“Le développement de quelques larves de cestodes.” 32, 228-232.

(488a) Joyeux & Baer are of opinion that larval similarities and differences provide no basis for taxonomic classification. Widely varying larval phases occur in closely related cestodes, and larval similarities in unrelated species. In the case of *Dipylidium cysticercoids* and certain tetrarhynch larvae the entire larva forms the adult in the definitive host, but re-encapsulates on arrival in the intestine of the wrong host, where it remains encysted. The cysticercus of *Cladotaenia cylindracea* (Bloch), developing in accipitrine birds and rodents, was studied in experimental mice and yielded a heavy infection involving the liver after 28 days. The process of evagination was studied experimentally in larvae developing in succus entericus and dog bile. Evagination occurred and movements began almost at once, the posterior portion remaining intact. Similar phenomena were observed in natural infections of voles. *Diphyllbothrium plerocercoids*, incubated in succus entericus at 37°C., showed separation of the posterior part, only the scolex forming the adult worm. The same phenomena occurred in an experimentally infected cat. In the closely related *Ligulinae*, however, where the larva occurs in a fish and the adult in a fresh-water bird, there is no such division. In *Cyathocephalus truncatus* Pall. developing in a fish and a gammarid the caudal appendage is apparently not lost. In the *Tetrathyridium* larvae of *Mesocestoides* a division like that of the plerocercoids occurs, one half degenerates and they can re-encapsulate. In *Cysticercus fasciolaris* the scolex and neck are enclosed in an involucre. The larva shows early segmentation, but in the cat's intestine everything degenerates except the head. The loss of the caudal vesicle was observed in succus entericus from a cat, but after 8 hours the segments were intact.

S.G.C.

489—Comptes Rendus Mensuels des Séances de la Classe des Sciences Mathématiques et Naturelles. Académie Polonaise des Sciences et des Lettres.

- a. JANISZEWSKA, J., 1937.—“Le troisième et le quatrième stade du développement des larves de *Contracaecum aduncum* Rud. de l'intestin du flet.” 1937, No. 1, p. 6.
 b. WIŚNIEWSKI, L. W., 1937.—“Le cycle évolutif et la biologie de la *Parafasciolopsis fasciolaemorphia* Ejsmont.” 1937, No. 1, p. 6.

(489a) [This paper appears in full in Bull. Int. Acad. Cracovie, see above No. 471a.]

(489b) [This paper appears in full in Mém. Cl. Sci. Acad. Polon., see below No. 559a.]

490—Comptes Rendus des Séances de la Société de Biologie.

- a. ETTISCH, G. & GOMES DA COSTA, S. F., 1937.—“Sur l'activité de diverses solutions huileuses d'un même composé.” 126 (29), 596-598.

(490a) Ettisch & Gomes da Costa find that the anthelmintic action of benzene, phenol and thymol tested against *Ascaris in vitro* varies with

different oils used as solvents. Although this is less noticeable with benzene than with the other 2 substances, solutions of the drugs in liquid paraffin are in each case more efficient than those in linseed oil, ground-nut oil, olive oil or "noyaux" oil.

K.S.

491—Cornell Veterinarian.

- a. STEPHENSON, H. C. & MILKS, H. J., 1937.—"Treatment of intestinal parasites of dogs and cats." 27 (2), 150-156.
- b. DANKS, G., 1937.—"Treatment and prevention of the common equine parasites." 27 (2), 164-169.
- c. BAKER, D. W., 1937.—"The control of sheep parasites." 27 (2), 218-221.
- d. STEWART, M. A., 1937.—"Iso-amyl-ortho-cresol: a new anthelmintic." 27 (4), 338-348.
- e. BAKER, D. W., 1937.—"Parasitic gastro-enteritis of calves." 27 (4), 381-394.

(491d) Stewart finds that iso-amyl-ortho-cresol is an efficient anthelmintic in the treatment of *Dipylidium caninum* when given at the rate of 0.1 c.c. per pound body-weight and followed by magnesium sulphate in water as a purgative. The drug is selective in its action and will not eliminate *Taenia multiceps*, *T. serialis* [= *T. serrata*] or *Dipylidium sexcoronatus*. The administration of 0.4 g. sodium bromide is recommended before giving the anthelmintic, to quieten the animal and to prevent vomiting.

K.S.

(491e) Baker describes an outbreak of parasitic gastro-enteritis in calves on a dairy farm in New York State. Autopsies showed marked emaciation, anaemia, oedema, severe gastro-enteritis and the presence of large numbers of *Ostertagia ostertagi* in the abomasum, *Cooperia onchophora* in the small intestine and some *Trichuris ovis* in the large intestine. Experimental infection of a one-sixth acre plot at the laboratories, by grazing with an infected calf from June 28th to July 22nd, resulted in a non-infected calf put out on August 23rd dying from a very heavy infection within one month.

J.W.G.L.

492—Cyprus Agricultural Journal.

- a. GAMBLES, R. M., 1937.—"Diseases of sheep and goats. (With special reference to Cyprus.) Part II. Diseases caused by animal parasites." 32 (1), 12-18.

(492a) Gambles gives a short popular description of the various helminth infestations of sheep and goats with special reference to incidence in Cyprus.

J.W.G.L.

493—Cytologia.

- a. HIRSCH, G. C. & BRETSCHEIDER, L. H., 1937.—"Die Arbeitsräume in den Darmzellen von *Ascaris*; die Einwirkung des Hungerns; die Sekretbildung." Fujii Jubilaei Volumen, pp. 424-436.

494—Deutsche Jägerzeitung.

- *a. HEINEMANN, E., 1937.—“Zur Frage der Verbreitungsmöglichkeiten wurmparasitärer Krankheiten des Wildes durch Fleisch- und Aasfresser.” 1937 (35), 2 pp.
- *b. HEINEMANN, E., 1937.—“Durch Süßwasserfische übertragene Parasiten als Ursache eines Möwensterbens.” 1937 (35), 2 pp.

495—Deutsche Landwirtschaftliche Geflügelzeitung.

- *a. SCHIRRMEISTER, E., 1937.—“Die Ausbreitung und Bekämpfung des Wurmbefalles in unseren Hühnerbeständen.” 41 (7), 83-84.

496—Deutsche Landwirtschaftliche Presse.

- a. KRÜGER, W., 1937.—“Nematoden an Rüben, Hafer und Kartoffeln zu einer Art gehörig?” 64 (25), p. 301.

(496a) Krüger discusses the problem of relationship between the root nematodes (*Heterodera schachtii*) attacking beet, oats and potatoes. From observations on the occurrence and distribution of these parasites he concludes that they do not represent a single species. M.J.T.

497—Deutsche Pelztierzüchter (Der).

- *a. SCHOOP, 1937.—“Trichinenschau bei Pelztieren.” 12 (13), 270-272.
- *b. LAW, R. G., 1937.—“Einige Beobachtungen über Fuchsparasiten.” 12 (21), 441-443.
- *c. GRIGEREK, H., 1937.—“Vorsicht bei der Verfütterung von Abfallfischen an Nerze!” 12 (22), 468-471; (23), 490-491.

(497c) According to an abstract in Tierärztliche Rundschau (44 (6), p. 95) Grigerek calls attention to the dangers of feeding fish offal—especially *Leucaspis delineatus*—to mink, since the resulting trematode infection may cause a poor growth of the winter coat and breeding failures. Cooking or freezing the fish prevents infection. B.G.P.

498—Deutsche Tierärztliche Wochenschrift.

- a. KRAFT, E., 1937.—“Beitrag zur Bekämpfung der Wurmkrankheiten der Pferde.” 45 (40), 641-643.

(498a) This is a resumé of Kraft's recent dissertation on the treatment of worm diseases in horses [see No. 713 below]. B.G.P.

499—Deutsche Zeitschrift für Chirurgie.

- a. PERRAS, T., 1937.—“Hämaturie bei extrarenalem Tumor.” 249 (9/10), 657-661.

* Original not available for checking or abstracting.

500—Día Médico.

- a. STAFFIERI, D., 1937.—“Anemia ankilostomiásica.” 9 (1), 9-13.
- b. PAVLOVSKY, A., DAL LAGO, R. & VOGOGNA, E., 1937.—“Doble quiste hidático de pulmón con pleura libre. Orientacion quirurgica.” 9 (9), 135-136.
- c. WELLER, E. S. & BERCOFF, S., 1937.—“Quistes hidatídicos calcificados del hígado.” 9 (11), 172-174.

(500a) On the basis of a case-report of hookworm anaemia, Staffieri discusses recent views on the aetiology, pathology, and treatment of this disease; in particular he quotes and discusses two cases presented by Marval at the 5th National Congress of Medicine.

B.G.P.

501—Duodecim.

- *a. ESKOLA, O., 1937.—[Toxicity of anthelmintics in light of bilirubin tests.] 53, 417-435.

502—Farmers' Bulletin. United States Department of Agriculture.

- a. SHILLINGER, J. E., 1937.—“Diseases of fur animals.” No. 1777, 22 pp.
- b. SHILLINGER, J. E. & MORLEY, L. C., 1937.—“Diseases of upland game birds.” No. 1781, 34 pp.
- c. SCHWARTZ, B., 1937.—“Internal parasites of swine.” No. 1787, 46 pp.

(502c) This bulletin deals with the internal parasites of swine in the United States and is designed to enable the farmer to identify the common forms. The life-histories are well described and illustrated by diagrams. An account is given of the swine-sanitation system recommended by the Bureau of Animal Industry.

R.T.L.

503—Fischerei-Zeitung.

- a. HEINEMANN, E., 1937.—“Der Fischbandwurm *Ligula intestinalis*, seine Entwicklung und seine wirtschaftliche Bedeutung.” 40 (24), 284-286.
- b. WILDE, J., 1937.—“Fortpflanzung und Entwicklung des Schleienactyl-ogyryus (*Dactylogyrus macracanthus*).” 40 (26), 309-311.
- c. HEINEMANN, E., 1937.—“Wieder Fischsterben im Kurischen Haff. Das diesjährige Kaulbarschsterben im Kurischen Haff und seine Ursache.” 40 (28), 333-335.

(503c) Heinemann describes a disease in ruff (*Acerina cernua*) in the Kurisches Haff, which had a very high mortality rate. Trematode larvae, which were recovered from the lens and vitreous humour of the eye of affected fish, are considered to be the causal agents.

A.E.F.

504—Folha Medica.

- a. PESSÔA, S. B., 1937.—“As verminoses na zona rural de São Paulo.” 18 (2), 17-22.
- b. PESSÔA, S. B. & PASCALE, H., 1937.—“Pesquisas sobre a ancylostomose em São Paulo. VI. Intensidade da ancylostomose nos escolares de varios municipios.” 18 (35), 589-591.

* Original not available for checking or abstracting.

505—Folia Clinica et Biologica.

- *a. PESSÔA, S. B. & PASCALE, H., 1937.—“Pesquisas sobre a ancylostomose em São Paulo. Observações sobre o tratamento da ancylostomose pelo tetrachlorethileno, baseadas em contagens de ovos, antes e depois da administração do remédio.” 9, 165-169.

506—Fortschritte auf dem Gebiete der Röntgenstrahlen.

- a. MALCHARTZECK, H. W., 1937.—“Nachweis der Bariumfüllung des Darmschlauchs bei dem beim Menschen parasitierenden Ascaris.” 56 (6), 759-764.

(506a) Malchartzeck has dissected an ascaris after its expulsion from a host to whom a barium meal had been administered. As barium was found in the intestinal tube of the ascaris, and as the presence of ascaris was indicated by striated shadows in the X-ray photograph of the host, the use of X-ray may be of considerable diagnostic value in obscure cases of ascariasis. K.S.

507—Fragmenta Faunistica Musei Zoologici Polonici.

- a. ZDUN, W. K., 1937.—“Przyczynek do znajomości nicieni kota domowego w Polsce.” 3 (4), 21-26. [German summary pp. 25-26.]

(507a) Zdun has examined the helminthic fauna of 40 domestic cats in Poland. *Toxocara cati* was the most common helminth. *T. canis* and *T. leonina* were also found. There were 13 cases of parasitism with *Capillaria felis cati* and 2 female specimens of another unidentified species of *Capillaria*. *Ancylostoma caninum* was recovered from 2 cats. Altogether only 27% of the cats were entirely free from parasites, most of them indeed were infected with several species. P.A.C.

508—Fukuoka-Ikwadaigaku-Zasshi.

- a. OKABE, K., 1937.—“The second intermediate hosts of *Exorchis oviformis* Kobayashi.” 30 (10), 106-109.

(508a) Okabe had previously found that *Exorchis oviformis*, from the intestine of *Parasilurus asotus*, uses various fish as second intermediaries [see Helm. Abs., Vol. V, No. 515a]. He now reports cysts also from tadpoles and adults of *Rana nigromaculata* and *R. rugosa*, and gives an illustrated description of the metacercaria. There is a possibility that metacercariae with eyespots previously recorded as *Clonorchis sinensis* may in fact be *Exorchis*. B.G.P.

509—Gaceta Medica de Caracas.

- a. PERDOMO HURTADO, B., 1937.—“Un caso de hepatitis febril do origen biliarzióica.” 44 (19), 290-291.

510—Gazette Médicale de France.

- *a. ALIVISATOS, C. N., 1937.—“A propos d'un cas de kyste hydatique de la colonne vertébrale.” 44, 433-436.

* Original not available for checking or abstracting.

511—Gazzetta Internazionale di Medicina e Chirurgia.

- *a. GRAZIANI, A., 1937.—“Cisticercosi calcificata nei muscoli.” 46, 213-214.
- *b. LUCCIONI, C., 1937.—“Psicosi e pederastia secondaria ad ascaridiasi svelata radiologicamente.” 47, 558-565.

512—Gazzetta degli Ospedali e delle Cliniche.

- a. LORENZO, F. DE, 1937.—“Un caso di echinococco multicolore del fegato.” 58 (27), 631-633.

513—Giornale di Clinica Medica.

- *a. MOLINARI-TOSATTI, P., 1937.—“Intradermo-reazione e trasporto passivo alla Prausnitz e Küstner nell'echinococcosi umana” 18, 1029-1047.

514—Giornale Italiano di Clinica Tropicale.

- *a. SERRA, G., 1937.—“L'anchilostomanemia dei bambini negri in rapporto con la povertà dell'ambiente in cui vivono.” 1 (12), 355-369.

515—Giornale di Psichiatria e di Neuropatologia.

- *a. LICHT, E., 1937.—“Glioma e cisticerchi in un cervello; studio anatomico-patologico.” 65, 277-296.

516—Göteborgs Kungl. Vetenskaps- och Vitterhetssamhälles Handlingar. Ser. B.

- a. VAN CLEAVE, H. J., 1937.—“Acanthocephala of the genus *Corynosoma* from birds of Dyer Island, South Africa.” 5 (2), 1-6.

(516a) Amongst acanthocephalan specimens from Dyer Island (off the west coast of Africa) Van Cleave found 2 distinct species of *Corynosoma*. One, from *Phalacrocorax africanus*, is tentatively assigned to *C. tunitae* owing to the immaturity of the specimens. The other, from *Phalacrocorax neglectus*, is described as *Corynosoma turbidum* n. sp. It is distinguished by the excessive size of the hooks on the midventral surface of the proboscis.

A.E.F.

517—Haematologica.

- a. COTTI, L., 1937.—“L'anemia da *Anchilostoma duodenale*.” 18 (2), 209-251.

(517a) Cotti has made a haematological and clinical study of 14 cases of hookworm anaemia from the aspects of medullary function and pathogenesis; one case was complicated by pernicious anaemia. His findings, that hookworm anaemia is characterized by a feeble but persistent regenerative tendency and by the absence of a haemolytic factor, are related to those of other workers in the subject.

B.G.P.

518—Harefuah.

- a. RATCHKOWSKI, B., 1937.—“A case of ascariasis and some observations on the problem of worms in Palestine.” 13 (3), 151-153.

* Original not available for checking or abstracting.

519—Higjena Produktów Zwierzęcych.

- a. TRAWIŃSKI, A., 1937.—“Serologiczna metoda rozpoznawania wągryzcy i włośnicy świń.” 2 (7), 1-5. (Supplement to Wiadomości Weterynaryjne, 16 (199).)

(519a) Trawiński discusses the diagnosis of *Cysticercus cellulosae* and *Trichinella spiralis* in pigs. He suggests the precipitation reaction may be useful and describes his method of preparation of the antigens and his conduct of the test. He claims his method to give an accurate index of infection.

P.A.C.

520—Hihu-to-Hitunyo.

- *a. KOBAYASI, T., 1937.—“Ein Fall von *Lymphovarrix filariosa bancrofti* mit mehreren Muttertieren.” 5, p. 19.

521—Hospital. Rio de Janeiro.

- a. MAGARINOS TORRES, C. & PACHECO, G., 1937.—“Staphyloemia, hepate suppurada na criança e ascarirose intestinal.” 11 (2), 137-144.
b. SILVEIRA, T. & MOURA CAMPOS, F. A. DE, 1937.—“Das trocas gazosas na ancylostomose.” 12 (2), 165-187. [English summary p. 186.]

522—Journal of Agricultural Research.

- a. STEWART, M. A., MILLER, R. F. & DOUGLAS, J. R., 1937.—“Resistance of sheep of different breeds to infestation by *Ostertagia circumcincta*.” 55 (12), 923-939.

(522a) A group of 29 lambs consisting of 5 breeds and one group of cross-breds was pastured on irrigated pasture and given supplementary food. *Ostertagia circumcincta* was known to be present on the pasture and the authors, assuming that the egg count indicated the degree of infestation with *O. circumcincta*, have shown by fortnightly egg counts over a period of one year that there was a significant variation in the susceptibility of the different herds to this infection. The results are analyzed by Fisher's pairing method and show that Romneys are outstanding in their resistance, followed by Rambouillet, Southdown, Shropshire and lastly Hampshire sheep.

J.W.G.L.

523—Journal de Chirurgie. Paris.

- a. BOTREAU-ROUSSEL, 1937.—“‘Elephantiasis arabum’; lymphangite éléphantiasique à rechutes.” 49 (6), 821-856.

524—Journal of Comparative Pathology and Therapeutics.

- a. MONTGOMERIE, R. F., 1937.—“Drugs of value in the treatment and control of liver-rot of sheep.” 50 (4), 314-316.

525—Journal of the Department of Agriculture. South Australia.

- a. McKENNA, C. T., 1937.—“Our present knowledge of two common diseases of sheep—infectious entero-toxaemia and internal parasites.” 41 (3), 264-271.

* Original not available for checking or abstracting.

(525a) McKenna states that the smaller trichostrongyles are the most important cause of parasitism in sheep in South Australia and that predisposing factors are insufficient nutrition and over-stocking. Control measures and treatment are also discussed. D.O.M.

526—Journal of the Elisha Mitchell Scientific Society.

- a. COUCH, J. N., 1937.—“The formation and operation of the traps in the nematode-catching fungus, *Dactylella bembicodes* Drechsler.” 53 (2), 301-309.

(526a) Couch has found that the nematode-snaring loops of the fungus, *Dactylella bembicodes*, are formed freely on acid culture media or when the food supply is limited or when the edge of a culture is cut. Partial closure of the loops can be caused by mechanical irritation and by 1% lactic acid. Complete and instantaneous closure may be induced by heat, either dry, i.e., by a hot needle, or by drops of warm water between 33°C. and 75°C. Nematodes entering rings cause an instantaneous closure by the swelling of the 3 cells comprising the ring. No relation can be advanced between the various mechanically induced closures and those set up by nematodes. T.G.

527—Journal of the Indiana State Medical Association.

- a. HEADLEE, W. H., 1937.—“The status of human parasite infections in Indiana.” 30 (10), 524-526.

528—Journal of the Japanese Society of Veterinary Science.

- a. ISSHIKI, O., 1937.—“On a nematode *Trichostrongylus axei* (Cobbold, 1879) from cattle and Noroshika in Chosen (Korea).” 16 (1), 61-89. [In Japanese : English summary pp. 12-13.]
- b. NIIMI, D., 1937.—“Studies on blackhead. II. Mode of infection.” 16 (2), 183-239. [In Japanese : English summary pp. 23-26.]
- c. ISSHIKI, O. & OGATA, S., 1937.—“On a nematode, *Capillaria bovis* (Schnyder, 1906), from a Chosen calf.” 16 (2), 240-249. [In Japanese : English summary p. 27.]
- d. SUGIMOTO, M. & NISHIYAMA, S., 1937.—“On the nematode, *Tropisurus fissispinus* (Diesing, 1861), and its transmission to chicken in Formosa.” 16 (3), 305-313. [In Japanese : English summary pp. 37-39.]

(528b) From his own observations Niimi agrees that *Heterakis papillosa* must be considered a true vector of the “blackhead” organism. The parasite can survive in the helminth egg longer than one year. The organism is not ingested in the free state but only in contaminated helminth eggs. The *Heterakis* is not therefore a mechanical transmitter but is a true reservoir host of the “blackhead” organism. R.T.L.

(528c) *Capillaria bovis* is recorded from cattle in Japan for the first time as a result of the finding of 2 female worms in the duodenal contents of a calf from South Chosen. R.T.L.

(528d) Sugimoto & Nishiyama have completed experimentally the life cycle of *Tropisurus fissispinus*. Insects, mainly Orthoptera, and annelids may serve as intermediate hosts. After ingestion the larvae develop to the infective stage in a period varying from 9 to 28 days. After ingestion by the definitive host, the larvae are freed and enter the glands of Lieberkühn where they reach maturity in about 90 days. P.A.C.

529—Journal of the Philippine Islands Medical Association.

- a. AFRICA, C. M., 1937.—“Evidence of intramucosal invasion in the life cycle of *Haplorchis yokogawai* (Katsuta, 1932), Chen, 1936 (Heterophyidae).” 17 (12), 737-743.

(529a) In experimentally infected animals large numbers of *Heterophyes yokogawai* invade the interior of the intestinal mucosa. The very mild tissue reaction and the absence of encapsulation by fibrosis may account for the filtration of eggs into the general circulation which has been observed in human cases.

R.T.L.

530—Journal of the Public Health Association of Japan.

- a. SHIMIZU, K. & KAWADA, T., 1937.—“Prevention of distomiasis hepatitis as carried out in Okayama Prefecture.” 13 (9), 1-4.
- b. SAITO, M., 1937.—“The effect of the installation of Home Office Design Privies on the prevention of parasite diseases as experimented in a certain village in Yamanashi Prefecture.” 13 (10), 7-10. [In Japanese.]
- c. SAITO, M., 1937.—“Effect of improved privies on the prevention of parasite diseases as experimented in a certain village in Yamanashi Prefecture.” 13 (11), 1-4.
- d. FUKUDA, C., 1937.—“Some clinical finding on *Trichostrongylus orientalis* Jimbo.” 13 (11), 7-27. [In Japanese : English summary in 13 (12), 1-2.]

(530a) As the miracidium of the fluke, *Notocotylus attenuatus*, which occurs in ducks in Japan, sterilizes the intermediate host, *Bulimus striatulus japonicus*, by invading the ovary, and as this mollusc is the intermediate host also of *Clonorchis sinensis* in the Okayama Prefecture, the keeping of infected ducks is being encouraged officially there. As Paradise Fish destroy this snail it is recommended that these be let free in the affected ditches and streams.

R.T.L.

(530c) Although anthelmintic treatment for 14 to 18 months had had no noticeable effect in reducing helminth infection, the introduction of an improved privy of “Home Office Design” reduced the number of egg carriers so that after 5 years the hookworm carriers were only one-fifth, the ascaris carriers only two-fifths and the whipworm carriers one-half of the previous number. No noteworthy decline took place in the number of carriers of *Schistosoma japonicum*.

R.T.L.

531—Journal de Radiologie et d'Électrologie.

- a. CASTAY, 1937.—“Un cas de macro-filaire (ou ver de Guinée) révélée par la radiographie.” 21 (10), 455-456.
- b. SMYRNIOTIS, P. C., 1937.—“Vessie bilharzienne calcifiée, dilatation des uretères et tumeur greffée sur la vessie ; diagnostic radiologique.” 21 (11), 489-493.

532—Journal of the Royal Army Veterinary Corps.

- a. WILLIAMSON, G., 1937.—“The estimation of the degree of entozoa infestation of equines by means of egg counts.” 8 (4), 173-175.

(532a) The faecal examination of one horse, using samples taken during the morning, mid-day and evening, and a sample of the whole day's evacuation

showed that the variation in the egg count was very great and inconsistent by both the sugar flotation and dilution methods. Williamson concludes that any single faecal examination in the horse gives no guide whatsoever to the helminthic infection present.

J.W.G.L.

533—Journal of the Royal Sanitary Institute.

- a. COCKELL, W. C., 1937.—“Soil sanitation.” 58 (5), 325-336.

(533a) Cockell outlines the inauguration and progress of the soil sanitation campaign in Fiji and the beneficial results which have been obtained. The methods of installation and re-inspection of latrines and of septic tanks are described.

R.T.L.

534—Journal of Science of the Hiroshima University. Series B, Division I. Zoology.

- a. OZAKI, Y., 1937.—“Studies on the trematode families Gyliuchenidae and Opistholebetidae, with special reference to lymph system.” 5, 125-165, 167-244.

(534a) Ozaki's two papers present a very careful histological and phylogenetic study of these two amphistomatous families. The Gyliuchenidae are shown to possess a lymph system similar to that of the Angiodictyidae, and these two families are allotted to the same phylogenetic group as the Balanorchidae and Paramphistomatidae. The Opistholebetidae, on the other hand, are phylogenetically separate, for they have no lymph system but an arrangement of pigment cells in the parenchyme tissue, which chemically contain purine or its derivatives, and hence are more closely connected with the excretory system. The genus *Maculifer* is transferred to the Opistholebetidae, *Petalocotyle* to the Gyliuchenidae.

E.M.S.

535—Journal of the Society of Tropical Agriculture. Taiwan.

- a. SUGIMOTO, M. & NISHIYAMA, S., 1937.—“On the nematode, *Tropisurus fissispinus* (Diesing, 1861), and its transmission to chicken in Formosa.” 9 (2), 226-235. [In Japanese: English summary pp. 234-235.]

(535a) [For abstract of this paper see Helm. Abs., Vol. VI, No. 528d.]

536—Journal of the South African Veterinary Medical Association.

- a. MONNIG, H. O., 1937.—“Note on the occurrence of *Hatertia gallinarum* in the korhaan.” 8 (4), p. 195.

(536a) Hitherto reported only from the domestic fowl, Mönnig has now found *Hatertia gallinarum* in the bustard *Heterotetrax vigorsi* collected at Kendrew, C. P., South Africa.

R.T.L.

537—Journal of Tropical Medicine and Hygiene.

- a. HASSAN, A., 1937.—“A quantitative study of the excretion of antimony.” 40 (14), 161-164.

(537a) [Hassan's study, of the excretion in the urine of antimony injected as Fouadin or tartar emetic, has been subsequently repeated by him with somewhat revised conclusions. See Helm. Abs., Vol. VII, No. 107f.]
B.G.P.

538—Journal d'Urologie Médicale et Chirurgicale.

- a. BILGER, F. & BRANZEU, P., 1937.—“Le kyste hydatique du rein.” 44 (6), 457-466.

539—Journal of Urology.

- a. VERMOOTEN, V., 1937.—“Bilharziasis of the ureter and its pathognomonic roentgenographic appearance.” 38 (5), 430-441.

540—Journal of the Washington Academy of Sciences.

- a. CHITWOOD, B. G. & CHITWOOD, M. B., 1937.—“The histology of nemic esophagi. VIII. The esophagus of representatives of the Enoplida.” 27 (12), 517-531.

(540a) Chitwood & Chitwood, in the 8th of their studies on the histology of the oesophagus of nematodes, deal with representatives of the order Enoplida, including genera in the sub-orders Enoplina, Dorylaimina and Dioctophymatina. The technical description of the various parts of the oesophagus and the distribution of the nuclei found in them follows the same scheme as in their earlier studies.
T.G.

541—Journal of Wildlife Management.

- *a. VAN CLEAVE, H. J., 1937.—“Worm parasites in their relations to wildlife investigations.” 1, 21-27.

542—Jugoslovenski Veterinarski Glasnik.

- a. WERTHEIM, P., 1937.—“Istraživanje metiljavosti III. *Galba truncatula* Müller u porječju rijeke Krapine i njeno suzbijanje.” 17, 100-112.
*b. PFAFFENRATH, F., 1937.—“Zaraza plućnim crvima kod avaca i njeno liječenje Antimosan-rastopinom ‘Bayer’.” 17, 294-295.

(542a) Wertheim's paper, which deals with biotopes of *Limnaea truncatula* in the basin of the river Krapina, forms part of a series on fascioliasis in Yugoslavia [see also Helm. Abs., Vol. V, Nos. 547a and 547b].
B.G.P.

(542b) [Treatment of lungworm disease in sheep with Antimosan solution.]

543—Khirurgiya.

- *a. AKHUNDOV, S. G., 1937.—[Clinical aspects of cerebral cysticercosis.] No. 1, pp. 34-42.
*b. LEVITINA, P. S., 1937.—[Case of obstructive jaundice caused by ruptured echinococcal cyst of liver.] No. 1, pp. 166-168.

* Original not available for checking or abstracting.

544—Klinicheskaya Meditsina.

- *a. POLETAEV, P. A., 1937.—[Strongyloidosis in patient with peptic ulcer.] 15, 621-623.
- *b. CHEKIN, V. Y., 1937.—[Pigmented urticaria in case of tapeworm infestation.] 15, p. 627.
- *c. EFENDIEV, M. E., 1937.—[Widal reaction in helminthiasis.] 15, 840-842.

545—Közlemények az Összehasonlító Élet-és Kórtan Köréből.

- *a. FÓRIZS, G., 1937.—[Experimentelle Untersuchungen zwecks Feststellung eines Flotationsverfahrens zum Nachweis von Ascaridia-Eiern.] 27, p. 12.

546—Land und Frau. Berlin.

- *a. HEINEMANN, E., 1937.—“Die Eileitererkrankung unserer Legehühner.” 21 (22), [Reprint 7 pp.]

547—Lingnan Science Journal.

- a. CHEN, H. T., 1937.—“Parasites in slaughter houses in Canton. Part III. Trematodes and cestodes parasitic in the alimentary tract of buffaloes.” 16 (4), 585-590.

(547a) Five trematodes and one cestode are reported from buffaloes slaughtered in Canton, viz., *Cotylophoron cotylophorum*, *Fischöderius elongatus*, *Paramphistomum orthocoelium*, *Eurytrema pancreatum*, *Fasciola hepatica*, and *Moniezia benedeni*.
R.T.L.

548—Lyon Médical.

- a. GARIN, C. & ROMAN, E., 1937.—“Exceptionnelle découverte dans l'intestin de l'homme de trois jeunes *Ascaris lumbricoides*, âgés d'un mois environ.” 159 (20), 557-561.
- b. GARIN, C. & ROMAN, E., 1937.—“Sur la coloration noire ardoisée de certains échantillons de trichocéphale, expulsés par des mineurs au charbon, et sur la présence dans l'épithélium intestinal de ce nématode de deux pigments distincts.” 159 (23), 637-640.
- c. ROUBIER, C., MORÉNAS, L. & LAVABRE, P., 1937.—“Distomatose hépatique à forme pseudo-typhique : efficacité de la médication thymolée.” 160 (31), 109-119.
- d. GARIN, C. & ROMAN, E., 1937.—“Sur un cas de bilharziose rectale sans polypose trouvé à Saint-Etienne chez un mineur originaire de Djibouti.” 160 (52), 689-691.

549—Marseille Médical.

- a. CRENN, R., 1937.—“Le parasitisme intestinal et ses conséquences dans la région de Bourail (Nouvelle-Calédonie).” 74 (31/32), 424-430.

550—Medical Annals of the District of Columbia.

- a. BOZICEVICH, J., 1937.—“Studies on oxyuriasis. III. The incidence of pinworm infestation in a group of 230 boys in Washington, D.C.” 6 (8), 239-241.

* Original not available for checking or abstracting.

(550a) Bozicevich found that 31% of 230 boys, belonging to the Metropolitan Police Boys' Clubs of Washington, D.C., were positive for Oxyuris infection, as diagnosed by the N.I.H. (cellophane) anal swab. If more than one swab could have been taken from each boy, the rate of incidence would probably have been higher. B.G.P.

551—Medical Journal of Australia.

- a. PENFOLD, W. J., PENFOLD, H. B. & PHILLIPS, M., 1937.—“Artificial hatching of *Taenia saginata* ova.” 24th Year, 2 (24), 1039-1042.

(551a) Exposure of the eggs of *Taenia saginata* to a pepsin-pancreatin sequence or to a solution of sodium hypochlorite is the best way of liberating the onchospheres. Dead eggs hatch as readily as live eggs in these artificial media. R.T.L.

552—Medical Parasitology and Parasitic Diseases.

- a. PÉTRASSOV, V. F. & ALÉXÉIEV, K., 1937.—“Cours de l'invasion par les helminthes parmi différents groupes de la population dans quelques villes de la région industrielle d'Ivanova de 1925-1934.” 6 (3), 378-388. [In Russian: French summary p. 388.]
- b. SHIKHOBALOVA, N. P., 1937.—“Étude expérimentale de la chimiothérapie de la trichocéphalose. I. Trichocéphalose des souris blanches.” 6 (3), 389-399. [In Russian: French summary pp. 399-400.]
- c. KHOKHOLKOVA, N. A., 1937.—“Inspection sur place des mineurs de la mine 'Akdjal' dans le but de déterminer les helminthes et les protozoaires.” 6 (3), 436-437. [In Russian.]
- d. KANDELAKI, S. P. & KAMALOV, N. G., 1937.—“The helminthic fauna of the population of Georgia.” 6 (4), 459-473. [In Russian: English summary pp. 472-473.]
- e. PANKOV, N. P., 1937.—“La faune des helminthes à Léninegrad et les résultats de la déshelminthisation.” 6 (4), 474-484. [In Russian: French summary p. 484.]
- f. VASSILKOVA, Z. G., 1937.—“Méthodes d'examen de l'eau à la recherche des oeufs d'helminthes.” 6 (4), 485-493. [In Russian: French summary p. 493.]
- g. DINNIK, J. A. & DINNIK, N. N., 1937.—“Influence de la température, de l'absence d'oxygène et du dessèchement sur les oeufs de *Trichocephalus trichiurus* (L.).” 6 (5), 603-617. [In Russian: French summary p. 618.]
- h. HALPÉRINE, M. O., 1937.—“Sur la question de la viabilité des oeufs des helminthes dans les composts des matières tourbeuses et fécales.” 6 (5) 619-625. [In Russian: French summary p. 626.]
- i. ERSHOV, V. S. & MALYGUINE, S. A., 1937.—“Un cas de *Moniezia* sp. observé chez l'homme.” 6 (5), 627-629. [In Russian: French summary p. 629.]
- j. SKRJABIN, K. J. & PODJAPOLSKAJA, V. P., 1937.—“Développement de l'helminthologie médicale en l'URSS.” 6 (6), 843-864. [In Russian.]

(552b) Shikhobalova infected white mice with *Trichocephalus muris* and ascertained the length of time taken in all stages of its development. She considers that the most favourable time to commence chemotherapeutic experiments on the mice is 10 days after the appearance of *Trichocephalus* eggs in the faeces. K.S.

(552c) Khokholkova's parasitological examination of 112 miners revealed 3 cases of infection with *Taenia* sp., 3 with *Hymenolepis nana* and 2 with *Trichuris*.
B.G.P.

(552d) The average infestation rate of the population of Georgia is 91.3% and 15 species of helminths have been reported. Hookworms occur exclusively in Western Georgia and correspond with the area of most abundant rainfall. The species rate is *A. duodenale* 80%, *N. americanus* 92%. Mixed infections were met with in 37.5% of cases and *N. americanus* alone in 62.5%. Tskhaltubo with 67.9% was the most highly infested centre. Here the soil is rich in red earth. Hookworms and *Ascaris* occurred generally in the villages while *Hymenolepis nana* and *Trichuris trichiura* were more usually urban.
R.T.L.

(552f) Filtration through a membrane or through filter paper proved the best technique for examining water for helminth eggs.
R.T.L.

(552g) The development of ova of *Trichuris trichiura* takes 11 days at 35°C., 29 days at 25°C., 57 days at 20°C. and 120 days at 15°C. *Trichuris* eggs can do without oxygen at all stages of development for 10 days at 30°C. and for considerably longer periods at lower temperatures. The eggs can also withstand desiccation for a long period.
R.T.L.

(552h) Using eggs of *Ascaris lumbricoides* and *Trichuris trichiura*, Halperine finds that the conditions which prevail in composts of turf and dung are not very favourable to their development owing to lack of oxygen, high temperature, etc. Owing to intense biothermic processes in dung composts, *Ascaris* eggs were destroyed within a few weeks in the upper layers whereas it took about two and one-half months in the deeper layers. In composts of faeces and turf 70% of the eggs did not undergo any change in the deeper layers in summer. The regular deposit of dirt and dung on composts in summer is the most rational method of preparing this for safe agricultural use.
R.T.L.

553—Medical Press and Circular.

- a. BECKER, J. G., 1937.—“Bilharzia infections and their distribution.” 195 (2), 30-34.

554—Medical Record.

- a. NORMAN, J. P., 1937.—“*Bothriocephalus latus* infection simulating peptic ulcer. Report of a case.” 146 (12), 533-534.

555—Medicina. México.

- *a. GALVÁN CAMPOS, F., 1937.—“Uncinariasis.” 17, 221-225.
*b. BALANZARIO ROSAS, I., 1937.—“Algunas consideraciones y estudios sobre la onchocercosis.” 17, 294-306.
*c. BALANZARIO ROSAS, I., 1937.—“Algunos datos sobre el tratamiento contra la onchocercosis.” 17, 331-334.
*d. TOLEDO SUMOZA, E., 1937.—“Campana sanitaria contra la onchocercosis.” 17, 376, 398, 449.

* Original not available for checking or abstracting.

556—Medicina de Hoy.

- a. CRESSON, 1937.—“Resección de la casi totalidad del lóbulo derecho del hígado con colecistectomía simultánea por kyste hidático del lóbulo derecho del hígado operado hace diez años.” 2 (9), p. 627.
- b. GUERRA, J. L., 1937.—“Historietas medicas. Tricocefalos en la cabeza.” 2 (10), p. 692.

557—Medycyna. Warsaw.

- *a. GOLCZYNSKI, Z., 1937.—[Case of generalized cysticercosis.] pp. 25-26.
- *b. JANUSZKIEWICZ, S., 1937.—[Conditions of visibility of ascarides in roentgen picture.] pp. 457-460.

558—Mémoires de l'Académie de Chirurgie.

- *a. CHATON, M., 1937.—“Complications chirurgicales dans l'échinococcose alvéolaire multiloculaire du foie (à propos d'une observation de la forme térébrante).” 63, 471-478.
- *b. DÉVÉ, F., 1937.—“Sur la présence méconnue de l'échinococcose alvéolaire du foie en France.” 63, 766-774.

559—Mémoires de l'Académie Polonaise des Sciences et des Lettres. Classe des Sciences Mathématiques et Naturelles. Série B. Sciences Naturelles.

- a. WIŚNIEWSKI, L. W., 1937.—“Entwicklungszyklus und Biologie von *Parafasciolopsis fasciolaemorpha* Ejsm.” Year 1937, No. 11, 1-113.

(559a) Wiśniewski finds that eggs of *Parafasciolopsis fasciolaemorpha*, from *Alces alces* in Poland, develop at 17° to 20°C. in 31 to 37 days. Temperatures above 36°C. are lethal and development is arrested below 10°C. The miracidium has 21 epidermal cells in 5 rows, and is positively phototropic and negatively geo- and chemotropic—the latter, since snails other than the intermediary, *Coretus corneus*, are avoided. Sporocysts were not found but there are two generations of rediae, and cercariae are shed, after infection of snails in winter, only after 6 months. Encystment begins within 20 minutes of being shed and occupies some 2 hours. The cysts remain viable in water up to 4 months, but drying for more than 30 minutes is lethal. Early development occurs in the small intestine of the elk, only mature forms migrating into the bile ducts. B.G.P.

560—Mémoires de l'Institut d'Égypte.

- a. BODENHEIMER, F. S., 1937.—“Prodromus faunae Palestinae. Essai sur les éléments zoo-géographiques et historiques du sud-ouest du sous-règne paléarctique.” 33, 286 pp.

(560a) This survey of the fauna of Palestine includes on pp. 252-255 a list of the helminths reported from that country. It contains 39 trematodes (including 11 new records for Palestine), 15 cestodes, 37 nematodes (14 new records) and 5 acanthocephalans (3 new records). A.E.F.

* Original not available for checking or abstracting.

561—Mémoires de l'Institut Royal Colonial Belge. Section des Sciences Naturelles et Médicales.

- a. HISSETTE, J., 1937.—“Onchocercose oculaire.” 5 (4), 1-114.

562—Memorias do Instituto Butantan.

- a. DREYFUS, A., 1937.—“Hermaphroditismo alternante proterogynico em *Rhabdias fülleborni* Trav.” 11, 289-297.

(562a) Dreyfus has found in a very young specimen of the hermaphroditic, parasitic stage of *Rhabdias fülleborni* that each gonad contains a few eggs followed by a clear testicular zone, the spermatozoa of which enter the receptaculum seminis. He compares the structure of this young gonad with that of the adult and concludes that *R. fülleborni* is a hermaphrodite which is alternately proterogynous.

T.G.

563—Memorias do Instituto Oswaldo Cruz.

- a. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1937.—“Novo trematodeo parasito de *Strix flammea perlata* (Licht).” 32 (4), 535-538.
 b. TRAVASSOS, L., 1937.—“Contribuição ao conhecimento da phylogenia dos Oxyuroidea (Nematoda).” 32 (4), 607-613.

(563a) Freitas & Lent approve the relative sizes of the oral and ventral suckers as a reliable diagnostic character for the differentiation of the species of *Eurytrema*. They describe *E. brauni* n. sp. from the gall bladder of *Strix flammea perlata*. It is similar to *E. voluptarium* and *E. illiciens*, being differentiated mainly by its almost equal suckers.

E.M.S.

(563b) Introducing the first of a series of papers on the phylogeny of the Oxyuroidea, Travassos discusses some peculiarities of the oesophagus and reproductive organs in this group. On the basis of the tripartite division of the nematode oesophagus into corpus, isthmus and bulbus, he shows that in many oxyuroids the isthmus (the portion crossed by the nerve ring) makes up the greater part of the oesophagus, the corpus being reduced (*Syphacia*) or absent (*Enterobius*, *Oxyuris*). The usually single “spicule” probably represents the gubernaculum, and the chitinous organ of *Syphacia*, etc., the telamon. In many genera the unpaired vagina takes over a uterine function, wholly or in part.

Travassos gives illustrated redescriptions of *Protozoophaga obesa* and *Wellcomeia decorata*, and describes *Syphacia venteli* n. sp. from the large intestine of *Nectomys squamipes* in Brazil.

B.G.P.

564—Mikrokosmos.

- a. FRANKENBERG, G. v., 1937.—“*Phyllodistomum folium* als Parasit des Stichlings.” 30 (4), 66-67.

565—Minerva Medica. Torino.

- a. GRAZZINI, A., 1937.—“Il segno del Santini nella diagnosi della ciste da echinococco. (Studio critico e sperimentale in patologia comparata).” Anno 28, 1 (22), 582-583.

566—Mississippi Doctor.

- *a. KELLER, A. E., 1937.—“Evaluation of clinical manifestations of hookworm infestation in children.” 14, 37-46.

567—Monatsschrift für Psychiatrie und Neurologie.

- a. DRAGONAS, E. & VLAVIANOS, G., 1937.—“Über zwei Fälle von Echinokokkuszysten im Gehirn, die durch ‘Aerostographie’ vor der Operation diagnostiziert wurden.” 95 (5/6), 334-345.
b. KASAKOW, P. T., 1937.—“Epileptiforme Krämpfe Erwachsener durch Darmparasitenabtreibung geheilt.” 95 (5/6), 358-362.

568—Monographias do Instituto Oswaldo Cruz.

- a. TRAVASSOS, L., 1937.—“Revisão da familia Trichostrongylidae Leiper, 1912.” No. 1, vii + 512 pp.

(568a) In a monograph of 512 pages and 295 plates Travassos gives a revision of 313 named and 15 unnamed species, 92 genera and 13 subfamilies of Trichostrongylidae Leiper. The subfamilies Graphidiinae, Trichohelicinae and Oswaldoneminae and the genus *Squamostrongylus* n. g., are new.
R.T.L.

569—Monthly Bulletin of the Bureau of Health. Manila.

- a. NOLASCO, J. O. & GACOB, C., 1937.—“Helminthiasis in children of pre-school age in the non-leper district of Culion.” 17 (7), 253-264.

570—Montpellier Médical.

- *a. DEDIEU, P., 1937.—“Ladrière et tuberculose porcine; leurs dangers respectifs pour l'homme.” 11, 174-181.

571—Mycologia.

- a. DRECHSLER, G., 1937.—“Some Hyphomycetes that prey on free-living terricolous nematodes.” 29 (4), 447-552.

(571a) Drechsler gives an illustrated technical description of 18 species of hyphomycete fungi which capture and destroy small free-living nematodes. For each species details are given of its peculiar organs of capture and entanglement, and the manner in which the fungal hyphae penetrate the body of the prey.
T.G.

572—Nagasaki Igakkwai Zassi.

- *a. TASHIRO, F., 1937.—“Über die Filariälymphangitis des Samenstrangs.” 15, 310-311.
*b. MIURA, G., 1937.—“Beiträge zur Kenntnis der Morphologie von *Diplogonoporus grandis*.” 15, 2391-2392.

* Original not available for checking or abstracting.

573—Natur und Volk.

- a. HOHORST, W., 1937.—“Die ‘Fühler-Made’ (*Leucochloridium* sp.) der Bernstein-Schnecke, ein für die Umgebung von Frankfurt a. M. neuer Saugwurm.” 67 (3), 122-132.

574—Nature. London.

- a. RUSHTON, W., 1937.—“Blindness in freshwater fish.” 140 (3554), p. 1014.

(574a) Blindness, due to the presence of larvae of *Diplostomum volvulus* in the lens, is recorded in yearling rainbow trout in Britain. R.T.L.

575—Nautilus.

- a. CHITWOOD, B. G. & CHITWOOD, M. B., 1937.—“Snails as hosts and carriers of nematodes and Nematomorpha.” 50 (4), 130-135.

(575a) The Chitwoods discuss snails as hosts for nematodes and Nematomorpha, under the following heads: (i) free and plant-parasitic nematodes accidentally passing through the gut, (ii) nematodes as obligatory parasites in the gut, (iii) parasitic larval nematodes in the foot-muscles, having a free adult stage, (iv) nematodes parasitic in the genitalia, (v) agamic nematodes and Nematomorpha in the body cavity, having a free adult stage, (vi) parasitic larval nematodes having adult stages as parasites of vertebrates. In the last group they state that “only one species is known, namely, *Müllerius capillaris*.” [It is difficult to understand why the following life-histories are not included: *Protostrongylus* (1930), *Elaphostrongylus* (1934), *Neostrongylus* (1934), *Crenosoma* (1935) and, possibly, *Aelurostrongylus* (1935).] B.G.P.

576—Nederlandsch-Indische Bladen voor Diergeneeskunde en Dierenteelt.

- a. KRANEVELD, F. C. & DJAENOEDIN, R., 1937.—“Stephanofilariosis. VIII. Oriënteerend onderzoek betreffende de therapie van het lijden.” 49 (5/6), 332-348.
- b. MEIJER, W. C. P., 1937.—“Over een lintworm van hond en kat, *Diphyllobothrium* (*Spirometra*) *erinacei* (Rudolphi, 1819) en het bijbehorende plerocercoid.” 49 (5/6), 370-380.

(576a) The drugs tested were brushed on to the lesions daily for a number of days. Promising results were obtained with aqueous solutions of Cooper's arsenical dip. Large lesions cannot be treated with the same concentrations as smaller ones. Too strong solutions produce oedema and necrosis. Favourable results can be expected from 3% solutions for small lesions and 2% for large ones, but further tests are required. Solutions of sodium arsenite should also be further tested. In successful cases the lesions healed and no live parasites could be found in the tissues after treatment. Rotenone gave uncertain results, while paradichlorobenzene, picric acid and a mixture of tar, petroleum, coconut oil and alcohol were ineffective. H.M.

(576b) The tapeworm *Diphyllobothrium erinacei* occurs frequently in cats and dogs in West Java and has also been found in Tapanoeli and Bali. The plerocercoid occurs in man, pig, frogs and certain wild rats and mice. Cats become infected through eating frogs. The plerocercoid is common in pigs slaughtered at Tapanoeli but it is not considered necessary to condemn such carcasses. The tapeworm is important as a parasite of cats and dogs.

H.M.

577—Nervenarzt.

- a. KLOOS, G., 1937.—“Kasuistik zur klinischen Diagnose der Cysticerken-Epilepsie.” 10 (7), 363-368.

578—New Zealand Journal of Agriculture.

- a. MACFARLANE, W. V., 1937.—“Liver-fluke in New Zealand sheep.” 55 (5), 274-279.

(578a) Contrary to earlier opinion *Potamopyrgus antipodum* and *P. corolla* are not intermediate hosts for *Fasciola hepatica* in New Zealand. Experimental infection in rabbits has demonstrated that the intermediary is *Myxas ampulla* of which about 5% are to be found infected in a normal fluke-infested pasture. The habitats of this snail are well defined and limited. Well-aerated water is required. Only fine silty loams form a suitable substratum. The characteristic locality is a seepage from a hillside where the flow of water is imperceptibly slow but constant and in which a short green rush *Juncus lampocarpus* is growing sparsely. Fluke has been reported from areas near Nelson, Opotiki and Ngaruawahia and in Hawke's Bay and Poverty Bay. In North Island fluke habitats occur, in limestone and sandstone, from Dannevirke to Tutira. It is absent from peat, andesitic volcanic ash and bush soils. It is recommended to use copper sulphate during a dry spell between August and October and in April but its efficacy is not great in a limestone country. Drenching of sheep with carbon tetrachloride is best done in late autumn, but given in April and June it will remove the major fluke infections acquired in summer and autumn. The ewes should also be vaccinated against “black disease” during the summer.

R.T.L.

579—New Zealand Medical Journal.

- a. BARNETT, L., 1937.—“Hydatid disease. A note on the incidence in New Zealand for the year 1936.” 36 (194), 241-244.
- b. BENNETT, W., 1937.—“Gaps in our present knowledge of the biology of the hydatid parasite.” 36 (196), 398-399.

(579b) In this summary of a paper read by Bennett before the Pathological and Bacteriological Society of New Zealand mention is made of apparatus for scoleciculture which might prove of value in the study of vesicular metamorphosis of the scolex as well as for problems in helminth physiology. The author had also observed that scolices in sheep offal showed movement for at least 2 weeks when kept at air temperature and that the number of scolices in a fertile cyst containing only 132 c.c. of fluid reached 800,000. The economic importance of hydatid in New Zealand is emphasized.

D.O.M.

580—Nordisk Medicinsk Tidskrift.

- a. TÖTTERMAN, G., 1937.—“Experimentella undersökningar över *Bothriocephalus latus*' roll i den perniciösa anemins patogenes.” 14 (32), 1320-1322. [English summary p. 1322.]
- b. NYSTRAND, F., 1937.—“Om *Cysticercus cellulosae*. Aproå tre fall av röntgendiagnostiserad muskelcysticercos.” 14 (39), 1589-1595. [German summary p. 1595.]

(580a) Tötterman has given 0.3 g. powdered broad tapeworm, or its equivalent in alcohol extract (which contains all of the active principle), daily for 2 to 4 weeks to 8 *Dibothriocephalus-anaemia* cases. Five reacted with a reduction up to one million in the red-cell count, with little or no decrease in the haemoglobin value. Three cases of typical pernicious anaemia gave no sign of this reaction, which is regarded as an allergic one.

B.G.P.

581—North American Veterinarian.

- a. SHAW, J. N., 1937.—“Studies on the effect of a diet deficient in vitamin A on lungworm infestation in sheep.” 18 (10), 25-27.

(581a) The feeding of 6 wethers on a vitamin A deficient diet consisting of wheat-straw, oats and beet pulp for 18 months did not cause increased susceptibility to experimental infection with lungworms. Symptoms of avitaminosis, viz., muscular inco-ordination, night blindness and urinary calculi, were produced in all animals.

J.W.G.L.

582—North Western Naturalist.

- a. BURKILL, H. J., 1937.—“*Viola lutea* Huds. and its parasites.” 12 (1), p. 37.

(582a) Burkill reports the presence of eelworms (genus and species undetermined) associated with eriophyid mites causing galls on *Viola lutea* collected in Shropshire.

T.G.

583—Novy Khirurgicheskii Arkhiv.

- *a. FAERMAN, I. M., 1937.—[Surgical treatment of pulmonary echinococcosis.] 37, 615-621.

584—Nyt Magasin for Naturvidenskapene.

- a. ALLGÉN, C., 1937.—“Über einige freilebende marine Nematoden aus der Strandfauna Norwegens.” 76, 245-272.

(584a) Allgén deals with marine nematodes from Norwegian beaches and lists 41 species belonging to 36 genera. Brief notes on the various forms are given and the sites of collection indicated.

T.G.

* Original not available for checking or abstracting.

585—Onderstepoort Journal of Veterinary Science and Animal Industry.

- a. ORTLEPP, R. J., 1937.—“Some undescribed species of the nematode genus *Physaloptera* Rud., together with a key to the sufficiently known forms.” 9 (1), 71-84.
- b. ORTLEPP, R. J., 1937.—“A hitherto unrecorded filaria, *Suifilaria suis* n. g., n. sp., from the domestic pig in South Africa.” 9 (1), 85-89.
- c. ORTLEPP, R. J., 1937.—“Whipworms from South African ruminants.” 9 (1), 91-100.
- d. ORTLEPP, R. J., 1937.—“South African helminths. Part I.” 9 (2), 311-336.
- e. VILJOEN, N. F., 1937.—“Cysticercosis in swine and bovines, with special reference to South African conditions.” 9 (2), 337-570.

(585a) A key is given for the differentiation of 71 species of the genus *Physaloptera*. Three recently described species have had to be omitted as descriptions were not available to the author. Subspecies are also omitted. The list includes 3 new species recorded in the paper, viz., *P. immerpani* n. sp. from the hedgehog *Atelerix frontalis*; *P. losseri* n. sp. from the pharynx of a hawk *Spizaetus bellicosus*; and *P. tasmani* n. sp. from *Chamaeleon macrolepis*. These three species were collected in South Africa. R.T.L.

(585b) In whitish oval cysts attached to the fasciae and free in the muscles of pigs slaughtered at Port Elizabeth, Ortlepp has found a number of adult filarial worms which he records as *Suifilaria suis* n. g., n. sp. It is placed in the Filariinae but differs from known genera of this subfamily in the combined presence of a buccal capsule, the modified lateral head papillae producing cuticular auricular structures, the reduced right caudal ala in the male and the tuberculate ornamentation of the female tail. No filaria species has hitherto been reported in domestic pigs in South Africa. The parasites do not affect the health of the host but the cysts are unsightly. R.T.L.

(585c) *Trichuris globulosa*, a common parasite in South Africa, and 3 new species, viz., *T. barbertonensis* n. sp. from cattle, *T. antidorchi* n. sp. from springbok and blesbok, and *T. parvispiculum* n. sp. from goats are described and illustrated. R.T.L.

(585d) Descriptions are given by Ortlepp of a number of helminths including 7 new species from South Africa, viz., (i) *Echinococcus felidis* n. sp. from a lion. It is distinguished from *E. lycaontis* by the rugose character of the hooks and the absence of the 3rd and 4th row of vestigial hooks. The rugose hooks also distinguish it from *E. cameroni*. (ii) *Anoplocephala genettae* n. sp. from *Genetta rubiginosa*; (iii) *Gyrocoelia kiewietii* n. sp. from *Hoplopterus armatus*; (iv) *Dubioxyuris macroselidis* n. g., n. sp. from *Macroselides proboscideus*; (v) *Subulura dentigera* n. sp. from *Numida mitrata*; (vi) *Heteroxyenema vlakhaasi* n. sp. from *Lepus capensis capensis*; (vii) *Hyracofilaria hyracis* n. g., n. sp. from unidentified species of Hyrax. A new family Dubioxyuridae is created for *Dubioxyuris* n. g. This genus has a corona radiata, buccal and pharyngeal capsules and teeth, a double-bulbed oesophagus, two

uteri, well-developed caudal expansions in the male, two spicules and a well-developed gubernaculum. Ortlepp is of opinion that it occupies an intermediate position between the Oxyurinae and Subulurinae. The new genus *Hyracofilaria* is placed in the Setariinae but differs from known genera of this subfamily in the presence of caudal alae and the absence of epaulette-like structures at the anterior end.

R.T.L.

(585e) Viljoen's very comprehensive work deals with cysticercosis in swine and bovines both in South Africa and in other countries. The introduction is a review of the earlier literature and is followed by a complete survey of the geographical incidence. Morphology, development and life cycle of *Cysticercus cellulosae* and *C. bovis* are described in detail, as are differential diagnosis, symptoms and pathology, including a review of the predilection sites. The judgment of measly carcasses in various countries is outlined and discussed, and it is suggested that if a more rigid system of meat inspection were employed in Great Britain the incidence of measles would be found to be much higher than has hitherto been accepted. One section of this article is devoted to the destruction of cysticerci in meat and on viability tests of various workers on chilled and frozen pork and beef. The importance of cysticercosis in relation to public health is stressed, and constructive suggestions for a more complete eradication of cysticercosis and taeniasis are put forward. The fact is emphasised that in South Africa the incidence in both man and animals is high, and that a scheme involving a veterinary inspection of meat on a far larger scale than is in force at present would lead to a great improvement in public health. There is appended a long list of references.

J.W.G.L.

586—Osservatore Medico.

- *a. GRAZIA, A. DI, 1937.—“Frequenza in Catania della filariosi canina.” 15 (9), p. 5.

587—Oto-Rhino-Laryngologia.

- a. SUZUKI, T. & SAKAI, M., 1937.—“Vor Ascariasis nach Mastoidoperation gewarnt.” 10, 1015-1023. [In Japanese: German summary pp. 1015-1016.]
- b. TAKAHASHI, C., 1937.—“Otitis media acuta verursacht durch Einwanderung eines Spulwurms in die Tube.” 10, 1024-1026. [In Japanese: German summary p. 1024.]

588—Pamiętnik Państwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Puławach. Wydział Weterynaryjny.

- a. OBITZ, K. & WADOWSKI, S., 1937.—“Przyczynki do zwalczania pasożytów zwierząt domowych w praktyce.” 1 (1), 85-97. [In Polish: English summary pp. 96-97.]

(588a) Tracheal injections with iodine preparations give good results in the treatment of lungworm in sheep. For *Fasciola hepatica* Nöller & Schmidt's method of subcutaneous injection with carbon tetrachloride mixed with

* Original not available for checking or abstracting.

paraffin is satisfactory in doses of 20 c.c. *Dicrocoelium dendriticum*, which is recorded for the first time in central and south Poland, is also effectively treated by this method. Drenches of copper sulphate and nicotine sulphate were given for intestinal worms in sheep by means of a rubber nasal stomach sound with varying degrees of success. The South African Government "wireworm" remedy gave relatively the best results. R.T.L.

589—Paris Médical.

- a. TSAMBOULAS, N. & SOTIRICU, S., 1937.—"Kystes hydatiques suppurés du poumon traités par les injections intraveineuses d'alcool." 27 (44), 338-339.

590—Pediatria.

- a. MARTILLOTTI, F., 1937.—"Su alcuni casi di anchilostomiasi nell'infanzia." 45 (9), 820-832.

591—Peking Natural History Bulletin.

- a. LI, J. C., 1937.—"Studies of the chromosomes of *Ascaris megalocephala trivalens*. I. The occurrence and possible origin of nine-chromosome forms." 11 (4), 373-379.
- b. WU, K., 1937.—"Helminthic fauna in vertebrates of the Hangchow area." 12 (1), 1-8.
- c. HU, S. M. K., 1937.—"Experiments on repeated infections of filarial larvae in *Culex pipiens* var. *pallens* Coq." 12 (1), 13-18.
- d. KU, C. T., 1937.—"On a new trematode parasite from the Peking duck." 12 (1), 39-41.
- e. KU, C. T., 1937.—"Two new trematodes of the genus *Notocotylus*, with a key to the species of the genus." 12 (2), 112-122.

(591b) Kuang Wu presents brief records of helminths in man, cat, dog, ox, rat, fishes, pig, duck, frog, and leopard, all from the region of Hangchow (Chekiang Province). In man, *Clonorchis sinensis* was found only in 2 Cantonese, though it is common locally in cats and dogs: the Chekiangese rarely eat raw fish. *Schistosoma japonicum* is reported from 3 of 55 cats and from 2 of 20 oxen, but it is relatively rare in man locally. *Fasciolopsis buski* has been found in a pig locally, but pigs normally have little access to water caltrops or chestnuts. B.G.P.

(591c) By feeding *Culex pipiens* var. *pallens* twice on the same filarial patient, with an interval of 6 to 8 days between feeds, Hu has shown that some mosquitos were susceptible on the first but not on the second occasion, some vice versa, and some on both occasions. B.G.P.

(591d) Chang-Tung Ku describes and figures *Echinostoma pekinensis* n. sp., from 2 specimens found in the intestine of an *Anas domestica* var. *pekinensis*, and differentiates it from related species. One unique feature is a marked constriction of the posterior testis. B.G.P.

(591e) *Notocotylus orientalis* n. sp. from the eastern bean goose, *Melanonyx fabalis serrirostris*, near Soochow, and *N. anatis* n. sp. from the Peking duck, *Anas domestica* var. *pekinensis*, near Peiping, are described and illustrated. A table sets out the characters of the 17 known species of the genus *Notocotylus* and this is accompanied by a differential key. R.T.L.

592—Pharmazeutische Zeitung.

- a. FREISE, F. W., 1937.—“Erfahrungen mit Oleum Chenopodii Anthelmintici.” 82 (85), 1023-1024.

(592a) Freise summarizes the various uses of oil of chenopodium in Brazil and mentions the methods of its preparation from wild and cultivated plants. Extensive toxicity tests have been carried out on animals, using an oil of known ascaridol content. The toxicity to the animal was found to decrease with the length of time after the oil's preparation, but no connection was found between lethal dose and ascaridol content. K.S.

593—Philippine Journal of Animal Industry.

- *a. MALLARI, A. I., 1937.—“A list of parasites of domestic animals arranged according to their sites of infestation.” 4 (4), 287-320.
 b. JESUS, Z. DE & MALLARI, A. I., 1937.—“Biology of *Limnaea philippinensis*, an intermediate host of *Fasciola hepatica* and *Fasciola gigantica* in the Philippines.” 4 (6), 501-513.

(593b) In 1935, de Jesus implicated *Limnaea philippinensis* as an intermediary of *Fasciola hepatica* in the Philippines [see Helm. Abs., Vol. IV, No. 608a]. With Mallari he now describes culturing the mollusc and gives data on its growth, breeding habits, and resistance to desiccation. The effect of various dilutions of copper sulphate is also described and the authors conclude that in a strength of 1 : 1,000,000 this salt is rapidly fatal to young and adult snails notwithstanding the presence of mud and algae. B.G.P.

594—Philippine Journal of Science.

- a. REFUERZO, P. G. & GARCIA, E. Y., 1937.—“*Neodiplostomum larai*, a new trematode parasite of the cattle egret.” 62 (2), 137-140.
 b. TUBANGUI, M. A. & MASILUNGAN, V. A., 1937.—“*Diplosetis amphacanthi* gen. et sp. nov., an Acanthocephala parasitic in a marine fish.” 62 (2), 183-187.
 c. AFRICA, C. M., LEON, W. DE & GARCIA, E. Y., 1937. “Heterophyidiasis. V. Ova in the spinal cord of man.” 62 (3), 393-397.
 d. TUBANGUI, M. A. & MASILUNGAN, V. A., 1937.—“Nematodes in the collection of the Philippine Bureau of Science, III.” 64 (3), 257-267.
 e. REFUERZO, P. G. & GARCIA, E. Y., 1937.—“*Pygidiopsis marivillai*, a new heterophyid trematode from the Philippines.” 64 (4), 359-362.

(594a) *Neodiplostomum larai* n. sp. from *Bubulcus ibis coromandus* is described. It resembles most nearly *N. orchilongum*. This is the fourth species of Alariidae found in the Philippines. R.T.L.

(594b) *Diplosetis amphacanthi* n. g., n. sp. from the marine fish *Amphacanthus oramin* is described and placed in a new acanthocephalan family named Diplosetidae. R.T.L.

(594c) Heterophyid ova have been found in lesions of the spinal cord in a case of sudden death due to heart failure. Identical ova were also present in extensive lesions of the myocardium. Adult *Heterophyes brevicaeca* and *Monorchotrema taihokui* were recovered from the small intestine. R.T.L.

* Original not available for checking or abstracting.

(594d) Systematic descriptions are given for *Molineus asiaticus* n. sp. and *Rictularia paradoxuri* n. sp. from *Paradoxurus philippinensis*; *Metabronema caranxi* n. sp. from *Caranx speciosus*, and *Chandlerella lepidogrammi* n. sp. from *Lepidogrammus cumingi*, from which *C. sinensis* is differentiated.

R.T.L.

(594e) *Pygidiopsis marivillai* n. sp., from the small intestine of a white-breasted sea eagle, *Haliaeetus leucogaster*, is the second species to be placed in the genus *Pygidiopsis* Looss. It is distinguished from *P. genata* largely by the greater size of the gonotyl.

E.M.S.

595—Plant Disease Reporter.

- a. THORNE, G., 1937.—“Inter-host transfer attempts with various strains of the bulb and stem nematode in Utah.” 21 (18), 326-328.

(595a) Thorne reports negative results obtained in small scale experiments to test the possibility of host transference of strains of *Ditylenchus dipsaci*. Seven strains were used in these experiments. It is pointed out that the conditions prevailing in these experiments differed widely from field conditions, but a field observation is quoted showing that the teasel strain was not transferred to other hosts when favourable field conditions occurred.

M.J.T.

596—Policlinico (Sezione Chirurgica).

- a. BENEDETTI-VALENTINI, F., 1937.—“Ernia diaframmatica congenita destra operata a freddo.” [Hydatidosis of the lungs.] 44 (6), 281-291.

597—Policlinico (Sezione Pratica).

- a. VANNI, V., 1937.—“Saggi di terapia biologica della ossiurosi.” 44 (47), 2233-2235.

(597a) Holding that treatment of oxyuriasis should be adapted to the peculiarities of the parasite's life-history, Vanni has relied upon a combination of treatments. He recommends a lacto-vegetarian diet with the addition of pepsin and pancreatin, intramuscular or intravenous injection of antimonial, mercurial suppositories and, where caecal infection occurs, short-wave therapy applied to the right abdomen. Of 10 cases so treated 9 were completely cured.

B.G.P.

598—Polska Gazeta Lekarska.

- *a. BAU-PRUSSAKOWA, S., 1937.—[Cysticercosis of central nervous system.] 16, 637, 661, 680.

599—Prensa Médica Argentina.

- a. YMAZ APPHATIE, I. L., 1937.—“Purificación de la toxina y anatoxina hidática.” 24 (36), 1731-1733.

(599a) Using the intradermal reaction Ymaz Apphatie has examined the efficiency of various fractions of hydatid fluid. Both the albuminous and

* Original not available for checking or abstracting.

saccharide fractions give specific reactions but the albuminous fraction gives an action which is more intense than either the saccharide fraction or the original whole fluid. The purification of hydatid antigen therefore serves a triple purpose—to increase the specificity of the intradermal and serological reactions, to increase the therapeutic result of the anatoxin, and finally to increase our knowledge of the pathological mechanism of the organic reactions in human hydatid.

P.A.C.

600—Presse Médicale.

- a. JOYEUX, C., 1937.—“La petite douve du foie.” 45 (39), p. 741.
- b. ALAJOUANINE, T., THUREL, R. & HORNET, T., 1937.—“Cysticerose méningée. (Considérations sur les arachnoïdites).” 45 (49), 918-920.
- c. JOYEUX, C., 1937.—“Les grands ténias de l'homme.” 45 (54), p. 1015.

(600a) Joyeux briefly summarizes our knowledge of the life-history of *Dicrocoelium dendriticum*, a common parasite of sheep which has been recorded from man on rare occasions.

R.T.L.

(600c) Joyeux points out that man became infected with many of his helminths after he had acquired a carnivorous habit of diet. Probably *Bertiella stuederi* was a usual parasite, for it is still a prevalent one in the large anthropoids. *Taenia solium* seems destined to disappear. It has already done so from several European countries and has recently become very scarce in France.

R.T.L.

601—Problemy Tuberkuleza.

- *a. ELKIND, M. S., 1937.—[Differential diagnosis between echinococcosis and perifocal abscess of pulmonary tissue.] No. 9, p. 98.

602—Proceedings of the 27th Annual Meeting of the Medical Section of the American Life Convention.

- a. REED, A. C., 1937.—“Ultimate prognosis of hookworm disease, malaria and amebiasis.” [Reprint 32 pp.]

603—Proceedings of the Indian Academy of Sciences. Section B.

- a. MIRZA, M. B. & BASIR, M. A., 1937.—“A report on the guinea-worm found in *Varanus* sp., with a short note on *Dracunculus medinensis*.” 5 (1), 26-32.
- b. LAL, M. B., 1937.—“Studies on the trematode parasites of birds. Part I. Value of different characters in the classification of avian trematodes.” 5 (2), 33-44.
- c. AKHTAR, S. A., 1937.—“*Chabertia rishati* n. sp.—a new nematode parasite of camel.” 5 (2), 45-47.
- d. HARSHEY, K. R., 1937.—“On two new trematodes of the genus *Opegaster* Ozaki, with a systematic discussion on the families Opecoelidae Ozaki, 1925 and Coitocaecidae Ozaki, 1928.” 5 (2), 64-75.
- e. MAHAL, H. S., 1937.—“Antiseptics and anthelmintics. Part III. Pharmacology of certain flavones with special reference to their anthelmintic action.” 5 (5), 186-194.
- f. VIDYARTHI, R. D., 1937.—“New avian trematodes of the sub-subfamily Corylurini Dubois 1936 (family Strigeidae, Railliet 1919).” 5 (6), 315-323.

* Original not available for checking or abstracting.

- g. PANDE, B. P., 1937.—“On some digenetic trematodes from *Rana cyanophlyctis* of Kumaon Hills.” 6 (2), 109-120.
- h. FROILANO DE MELLO, I. & FONSECA, L. DA, 1937.—“Further notes on the haemoparasitology of the Indian birds.” 6 (4), 213-219.
- i. AKHTAR, S. A., 1937.—“Report on some nematode parasites of Kabul, with descriptions of new species.” 6 (5), 263-273.
- j. LAL, M. B., 1937.—“Studies on the trematode parasites of birds. Part II. Morphology and systematic position of some new blood-flukes of the family Schistosomidae.” 6 (5), 274-283.

(603a) *A. Dracunculus* is reported from 60% of an unnamed species of *Varanus* in India. The authors believe this guinea-worm to belong to the species *D. medinensis*.
R.T.L.

(603b) Lal surveys the factors which at present govern the classification of avian trematodes. He is of opinion that only those characters which are present both in the larva as well as the adult should be regarded as of primary importance. Allowance should always be made for individual variations in assigning any trematode to its true systematic position. Host-specificity in relation to classification is discussed briefly.
R.T.L.

(603c) *Chabertia rishati* n. sp., described by Akhtar from the large intestine of a camel, resembles *C. ovina* from which he differentiates it as follows: “mouth directed antero-ventrally and a faint ventral cervical groove; but it differs in spite of different measurements, which show the worm to be stouter than *C. ovina*, in having small elements on only one and the anterior leaf-crown, in having oesophagus with lamellae and the male having a plate of knobs with small terminal spines in the depth of buccal capsule.”
R.T.L.

(603d) *Opegaster mastacembalii* n. sp. and *O. mehrii* n. sp. in the eel, *Mastacembalus armatus*, are recorded from India. It is suggested that the families Opecoelidae and Coitocaecidae should be abandoned, and their genera incorporated in the subfamily Opecoelinae which Manter includes in the Allocreadiidae. Keys are given for the 5 genera of Opecoelinae and the 7 species of *Opegaster*.
R.T.L.

(603e) Mahal has carried out *in vitro* experiments on the anthelmintic action of certain flavones against *Ascaris lumbricoides* and *Taenia serrata*. Negative results were obtained.
R.H.H.

(603f) Descriptions are given of the Indian trematodes *Apatemon indicus* n. sp. and *A. casarcus* n. sp. from *Casarca ferruginea*, *Pseudostrigea sarcogyponis* n. sp., and *Cotylurus orientalis* from the common teal *Nettion crecca crecca*.
R.T.L.

(603g) Pande describes three new species of trematodes from *Rana cyanophlyctis*, viz., *Diplodiscus mehrai* n. sp. from the rectum, *Pneumonoeces almorai* n. sp. from the lungs, and *Ganeo kumaonensis* n. sp. from the small intestine. Each species is differentiated from related species in the same genus.
E.M.S.

(603h) This account of blood protozoa includes a new species named “*Microfilarium limai* n. sp.” from *Ardeola grayi*.
R.T.L.

(603i) *Ascaridia razia* n. sp. in *Columba livia*, *Subulura kabanus* n. sp. in *Tetraogallus* sp., *Tachygonetria inflatocervix* n. sp. in *Testudo ibera* are recorded from amongst 10 species of Nematelmia collected in Kabul. R.T.L.

(603j) *Chinhuta indica* n. g., n. sp. in the common teal, *Nettion crecca*, and *Gigantobilharzia egretta* n. sp. in the cattle egret, *Bubulcus ibis coromandus*, are described from India. The new genus *Chinhuta* differs from other genera of Bilharziellinae in having an extremely well-developed gynaeophoric canal and differs from the Schistosominae in having the testes and the cephalad union of the intestinal caeca placed behind the caecal union. It is nearly allied to *Bilharziella*. The validity of the subdivision of the family Schistosomidae into subfamilies is questioned. R.T.L.

604—Proceedings of the Indian Science Congress (24th).

- a. THAPAR, G. S., 1937.—“Helminthological research in India.” Section of Zoology, pp. 275-290.
- b. INDIAN SCIENCE CONGRESS, 1937.—[Abstracts of papers presented at the 24th Indian Science Congress.] Section of Zoology, pp. 291-309.
- c. INDIAN SCIENCE CONGRESS, 1937.—[Abstracts of papers presented at the 24th Indian Science Congress.] Section of Medical and Veterinary Research, pp. 385-402.

(604b) The Proceedings of the 24th Indian Science Congress, Section of Zoology, contains the following abstracts of helminthological interest: (i) J. Dayal “A new trematode from the intestine of a fish, *Clarias magur*”; (ii) M. B. Lal “Observations on the sexual congress in *Levinseniella indica*”; (iii) M. B. Lal “On the characters of systematic importance in the classification of trematodes”; (iv) H. D. Srivastava “New Fellodistomids (Trematoda) from Indian fishes. Part II. Two new parasites of the sub-family Discogasterinae Yamaguti, 1934, from Indian marine food fishes”; (v) H. D. Srivastava “New Fellodistomids (Trematoda) from Indian Food fishes. Part III. A new parasite of the genus *Haplocladus* Odhner, 1911, from the gut of an Indian marine fish”; (vi) H. D. Srivastava “New Fellodistomids (Trematoda) from Indian food fishes. Part IV. On a new genus *Yamagutia* gen. nov., from the intestine of an Indian marine fish”; (vii) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part II. Three new parasites of the genus *Sterrhurus* Looss, 1907”; (viii) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part III. Two new parasites of the genus *Lecithocladium* Looss from Indian fishes with a revision of the genus”; (ix) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part IV. On a new species of trematode, *Ectenurus indicus* n. sp., from the gut of several marine fishes”; (x) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part V. A new parasite *Stomachicola secundus* n. sp., of the sub-family *Duvvinae*”; (xi) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part VI. Two new parasites of the genus *Aponurus* Looss 1907 (sub-family—Lecithasterinae)”; (xii) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part VII. A new parasite of the genus *Hystero-lecitha* Linton, 1910”; (xiii) H. D. Srivastava “New Hemiurids (Trematoda) from Indian marine food fishes. Part VIII. The morphology and systematic

relationship of a new parasite, *Indoderogenes purii* gen. et sp. nov. (sub-family Derogenetinae)"; (xiv) H. D. Srivastava "The parasites of the family Acanthocolpidae Luhe, 1909, from Indian marine food fishes"; (xv) H. D. Srivastava "New Allocreadiids (Trematoda) from Indian marine food fishes. Part III. *Pedunculacetabulum pedicellata* n. sp., from the gut of *Chiloscyllium indicum*"; (xvi) H. D. Srivastava "A new Gorgoderid trematode from the urinary bladder of an Indian migratory fish—*Belone strongylura*"; (xvii) H. D. Srivastava "Studies on the gasterostomatous trematodes of Indian food fishes"; (xviii) H. D. Srivastava "Studies on the amphistomatous parasites of Indian food fishes. Part II. New parasites of the genus *Gyliauchen* Nicoll from the intestine of an Indian marine fish"; (xix) B. B. Sinha "On the systematic position of the genus *Xenopharynx* Nicoll"; (xx) G. K. Chakravarty "*Dirofilaria indica* n. sp., from dog"; (xxi) M. Amin "Cestode parasites of sheep and goats in the Punjab."

A.E.F.

(604c) The Proceedings of the 24th Indian Science Congress, Section of Medical and Veterinary Research, contains the following abstracts of helminthological interest: (i) M. A. N. Rao "A preliminary report on canine schistosomiasis in Madras Presidency"; (ii) M. R. Mahajan "Field investigation of the problem of liver fluke infestation amongst cattle and sheep in Hyderabad State"; (iii) H. D. Srivastava "A study of the life-history of *Cotylophoron cotylophorum* (Fischöeder, 1901) Stiles and Goldberger, 1910, of Indian ruminants and a biological control to check the infection"; (iv) H. D. Srivastava "A study of the life-history of a common tapeworm, *Mesocostoides lineatus*, of Indian dogs and cats"; (v) H. D. Srivastava "Studies on the helminth parasites of Indian poultry. Part I. A new fluke from the oviduct of fowl"; (vi) H. D. Srivastava "Studies on the helminth parasites of Indian poultry. Part II. The occurrence of gape-worms in fowls"; (vii) H. D. Srivastava "Studies on the helminth parasites of Indian poultry. Part III. The occurrence of two spirurid stomach-worms in fowls"; (viii) H. D. Srivastava "A few species of anoplocephalid tapeworm of the genus *Bertiella* from a domestic pigeon"; (ix) H. D. Srivastava "The occurrence of an interesting nematode in the lungs of an Indian cat"; (x) H. D. Srivastava "The occurrence of *Paragonimus westermanii* in the lungs of cats in India"; (xi) H. D. Srivastava "The occurrence of an unrecorded filarid nematode, *Onchocerca cervicalis* Railliet and Henry, 1910, in the ligamentum nuchae of horses in India"; (xii) H. D. Srivastava "An unrecorded spirurid worm, *Rictularia cahirensis* Jagerskiöld, 1904, from the intestine of an Indian cat"; (xiii) H. D. Srivastava "The morphology and systematic relationships of a new parasite—*Waretrema piscicola*—gen. et sp. nov., referable to a new family—Waretrematidae n. fam., of digenetic trematodes"; (xiv) H. D. Srivastava "Studies on the amphistomatous parasites of Indian food fishes. Part I. Two new genera of amphistomes from an Indian fresh-water fish, *Silundia gangetica*"; (xv) H. D. Srivastava "Studies on the family Heterophyidae Odhner, 1914. Part II. Parasites belonging to a new sub-family Polyorchitreminae from the gut of an Indian fresh-water fish"; (xvi) H. D. Srivastava "The morphology and systematic relationship of a new parasite *Mehracola ovocaudatum* gen. et sp. nov.,

(family Acanthostomidae) from an Indian marine food fish"; (xvii) H. D. Srivastava "The morphology and systematic relationship of two new distomes of the family Haplospalchnidae Poche, 1926, from Indian marine food fishes."

A.E.F.

605—Proceedings of the Linnean Society of New South Wales.

- a. JOHNSTON, T. H., 1937.—"Entozoa from the Australian hair seal." 62 (1/2), 9-16.

(605a) Hitherto no parasites have been found in the Australian hair seal *Arctocephalus forsteri*. Harvey Johnston now records *Diphyllbothrium arctocephalinum* n. sp., *Contracaecum osculatum* and *Corynosoma australe* n. sp. The new tapeworm differs from all other species of *Diphyllbothrium* in the position of the common genital pore in relation to the length of the segment. Its nearest relative is *D. mansoni*.

R.T.L.

606—Proceedings of the National Academy of Sciences, India.

- a. PANDE, B. P., 1937.—"Two new fish trematodes from Allahabad." 7 (2), 111-115.
 b. VIDYARTHI, R. D., 1937.—"New strigeids (Trematoda) from Indian birds." 7 (3), 193-201.
 c. PANDE, B. P., 1937.—"*Prosotocus himalayai* n. sp., a frog trematode (Lecithodendriidae)." 7 (3), 202-204.

(606a) Pande describes two apparently new fish trematodes. They are *Pleurogenes pabda* n. sp. from *Callichrous pabda*, a first record of the genus *Pleurogenes* from an Indian fish, and *Opegaster beliyai* n. sp. from *Gobius giurus*.

E.M.S.

(606b) Vidyarthi describes 4 new species, 2 of *Strigea* and 2 of *Apharyngostrigea*. They are *Strigea orientalis* n. sp. from *Sarcogyps calvus*, *S. nephronis* n. sp. from *Nephron percnopterus ginginianus*, *Apharyngostrigea ardeolina* n. sp. from *Ardea cineria cineria*, and *A. indiana* n. sp. from *Egretta alba*. The genus *Ridgeworthia* Verma, 1936 is dropped as untenable, and its species is assigned to *Apharyngostrigea*.

E.M.S.

(606c) *Prosotocus himalayai* n. sp., from *Rana cyanophlyctis*, is described and differentiated from the other 4 species of the genus occurring in frogs. [The location of the parasite in the host is not given, but it is probably the duodenum.]

E.M.S.

607—Proceedings of the Royal Society of Victoria.

- a. DRUMMOND, F. H., 1937.—"Cestoda." in: "Lady Julia Percy Island. Reports of the expedition of the McCoy Society for field investigation and research." 49 (2), 401-404.

(607a) During a survey of Lady Julia Percy Island, off the coast of Victoria, 5 cestodes were discovered. Drummond identifies these as *Phyllobothrium musteli* from a shark, *Mustelus antarcticus*, and *P. thridax* from *Heterodontus philippi*. *Acanthobothrium heterodonti* n. sp. from the spiral valve of *H. philippi* is distinguished by the presence of accessory suckers, by

the shape of the hooks, which he figures, and by a number of small points in the genitalia. A new species of *Platybothrium* is mentioned but not named as only immature specimens were obtained. *Diphyllbothrium arctocephali* n. sp. which was recovered from a seal, *Arctocephalus tasmanicus*, is described but is not contrasted with other members of this genus. P.A.C.

608—Proceedings of the Somersetshire Archaeological and Natural History Society.

- a. BECK, R., 1937.—“ ‘Mermis’ thread-worm (Nematoda) in wasp (*Vespa vulgaris*). ” 82, 222-223.

(608a) [For abstract of this paper see Helm. Abs., Vol. VI, No. 300a.]

609—Proceedings of the Staff Meetings of the Mayo Clinic.

- a. SCHEIFLEY, C. H., 1937.—“ The localization of *Trichinella spiralis* in the muscles of its host.” 12 (23), 367-368.
 b. SMITH, H. L. & MAGATH, T. B., 1937.—“ Calcified echinococcus cysts in the liver : report of case.” 12 (26), 405-408.
 c. DEEDS, D., 1937.—“ Hydatid disease : report of a recent case.” 12 (26), 409-413.
 d. GRAY, H. K., 1937.—“ Surgical treatment of hydatid disease.” 12 (26), 414-416.
 e. OFEIGSSON, O. J., 1937.—“ Hydatid disease in Iceland.” 12 (27), 420-421.
 f. HINSHAW, H. C., 1937.—“ Hydatid disease in the Near East.” 12 (27), 422-423.

(609a) [For a fuller account of this work see Helm. Abs., Vol. VI, No. 1j.]

(609e) Ofeigsson states that hydatid reached its highest incidence in Iceland about 1867. He cites the prophylactic measures which have since been enforced and gives a striking chart showing the percentage of population infected from 1867 to 1920. In 1867 there were 1,300 infected persons out of a 69,000 population, i.e., a ratio of 1 : 50 whereas in 1920 there were only 36 infected persons out of a population of 95,000, i.e., a ratio of 1 : 2,638.

R.T.L.

(609f) In Beirut one quarter of 500 dogs which were examined were found to harbour adult *Taenia echinococcus*. Of 5,000 sheep and goats from various localities hydatid cysts were found in nearly half, and a like percentage occurred in 300 cattle. The jackal is one of the commonest of wild animals in Syria and is as frequently infected as the dogs. One out of every 223 patients is admitted to hospital for hydatid.

R.T.L.

610—Progrès Agricole et Viticole.

- a. BONNET, A., 1937.—“ L'anguillule de la vigne.” 108 (31), 93-96.

(610a) Bonnet gives a brief popular account of the occurrence of *Heterodera marioni* on young vines and market garden crops in southern France.

M.T.F.

611—Protoplasma.

- a. HIRSCH, G. C. & BRETSCHNEIDER, L. H., 1937.—“Der intraplasmatische Stoffwechsel in den Darmzellen von *Ascaris lumbricoides*. Teil II. Die Adsorption von Eisen und die Beteiligung der Golgikörper dabei.” 29, 9-30.
- b. WOTTGE, K., 1937.—“Die stofflichen Veränderungen in der Eizelle von *Ascaris megalocephala* nach der Befruchtung.” 29, 31-59.

(611a) Hirsch & Bretschneider have examined the intestinal cells of female *Ascaris lumbricoides*, after feeding them with saccharated iron. Absorption of free iron took place exclusively in the “border” layers of the Golgi bodies. The iron was later transported to inner bodies within the Golgi bodies, and there stored up. The results throw light on the structure and mechanism of Golgi bodies. R.H.H.

(611b) Wottge has carried out studies on the eggs of *Ascaris megalocephala*. The unfertilized ovum contains yolk bodies, granules, transparent vacuoles, and scattered lumps which are strongly refractive. It is surrounded by a permeable membrane of an albuminous nature. After fertilization of the ovum, the albuminous membrane becomes separated from the cell body by the formation of a chitinous membrane, impermeable to most substances and with difficulty permeable to gases. During maturation of the ovum, a striated covering of a cholesterin nature is formed within the chitinous membrane. The changes within the cell which accompany the formation of these membranes are described and discussed. R.H.H.

612—Przegląd Weterynaryjny.

- a. ENGEL, E., 1937.—“Wagrzyca bydła jako aktualny problem higieny mięsa.” 52 (8), 414-417.
- b. LACHOWICZ, J. P., 1937.—“Badania doświadczalne nad stosowaniem odczynu Biernackiego (szybkość opadania krwinek) przy włośnicy.” 52 (8), 437-456. [German summary p. 456.]

(612a) By using Czokotowski's technique of examining carcasses for *Cysticercus*, which consists of making six incisions of the masseter muscles, two externally and one internally on each side, Engel found during five years observations in the Trembowla slaughter house that 2.07% of 5,640 cattle were infested. This is considerably higher than the official statistics, owing to the inadequacy of routine methods of examination. Engel draws attention to the fact that when the examination of the masseter muscles is negative it is possible occasionally to find cysticerci in the body muscles. R.T.L.

(612b) Experiments to test the application of the Biernacki reaction in the diagnosis of trichinellosis in experimentally infected rabbits, showed that the blood corpuscle reduction is demonstrable from about the 7th day of the infection and lasts, according to the severity of the infection, about 14 days (infection with about 100 to 300 *Trichinella*) or 30 days (infection with 500 to 5,000 *Trichinella*). The greatest blood corpuscle reduction occurs after 30 minutes. It gradually diminishes after one or two hours. A.E.F.

613—Psychiatrisch-Neurologische Wochenschrift.

- a. PFEIFFER, 1937.—“Oxyuren und Anstaltspellagra.” 39 (45), 508-512.

614—Puerto Rico Journal of Public Health and Tropical Medicine.

- a. KOPPISCH, E., 1937.—“Studies on Schistosomiasis mansoni in Puerto Rico. IV. The pathological anatomy of experimental Schistosomiasis mansoni in the rabbit and albino rat.” 13 (1), 1-54. [In Spanish pp. 55-114.]
- b. PONS, J. A., 1937.—“Studies on Schistosomiasis mansoni in Puerto Rico. V. Clinical aspects of Schistosomiasis mansoni in Puerto Rico.” 13 (2), 171-254. [In Spanish pp. 255-349.]

(614a) Koppisch deals with the gaps in our knowledge of the tissue reactions to *Schistosoma mansoni* infection, particularly those changes in various viscera which arise during the migration of the young parasites before they reach their final habitat in the mesenteric and portal veins. A detailed study has been made of the changes which follow a single experimental inoculation with cercariae of *S. mansoni* during the first 6 months in the rabbit and the first 9 months in the mouse. The paper is illustrated by 49 fine microphotographs. The cercariae leave the skin by the lymphatics and the route followed is exclusively intravascular. The initial reaction is with pseudoeosinophilic infiltration of the corium and regional lymph glands. There is an increased production of pseudoeosinophils in the bone marrow and a slight acute splenic tumour in the first 10 days. None of the lesions provoked by the migration of the immature forms results in permanent damage. Eosinophils predominate after the 30th to 40th day. Epithelioid cells are formed about young, adult and dead worms. Most of the morbid changes are due to the presence of the parasites, and the ova, in the rabbit and white rat, play a relatively minor rôle. Schistosomiasis in these animals differs therefore in several important respects from the disease in man, but some of the differences noted may be attributable to the fact that in the cases studied the dose was a single inoculation while in man the disease is the result of repeated exposures.

R.T.L.

615—Radiologia Medica.

- *a. IMPALLOMENI, R., 1937.—“Rilevi radiodiagnostici in alcuni casi di bilharziosi uro-vescicale osservati in Cirenaica.” 24, 504-510.

616—Rassegna Medica.

- *a. SERIO, F. & PISA, G. DI, 1937.—“Note cliniche su una epidemia di trichinosi in Sicilia.” 17, 57-67.

617—Rassegna della Previdenza Sociale.

- *a. BIANCHI, G., 1937.—“La glutatonemia nella anchilostomiasi.” 24, 23-46.

618—Records of the Indian Museum.

- a. DATTA, M. N., 1937.—“Acanthocephala from India. Description of the male of *Eosentis rigidus* Van Cleave occurring in the intestine of *Scizothorax zarudnyi* from Seistan.” 39 (3), 303-304.

* Original not available for checking or abstracting.

619—Recueil de Médecine Vétérinaire.

- a. HENRY, A., 1937.—“Prophylaxie des helminthoses.” 113 (11), 728-743.

(619a) Henry discusses in general terms the control of helminthiases, illustrating his article with 4 of the “strategy diagrams” of the late Dr. M. C. Hall. His scheme deals with (i) control of the adult parasite in the definitive host by therapeutic means, under which heading he stresses the importance of treating sub-clinical cases and of protecting young animals from infection; (ii) control of extra-corporeal eggs and larvae, which must be adapted to the nature of the life cycle; and (iii) control of intermediate hosts. B.G.P.

620—Revista de la Asociación Médica Argentina.

- *a. PÓVOA, H., 1937.—“Anemia ancylostomótica é afecção de carencia.” 51, 297-303.
*b. PABLO, V. E. DE, 1937.—“Inyección broncográfica por vía laríngea de una cavidad quística del lóbulo medio exclusivamente; influencia de la posición y viscosidad de los líquidos sobre el bronquio de drenaje.” 51, 562-563.
*c. ROSSI, R. & LOZANO, F. S., 1937.—“Pneumoquiste y abscesos miliares de hígado.” 51, 738-742.

621—Revista da Associação Paulista de Medicina.

- *a. GUILHERME, I. & BRANDI, R., 1937.—“Tratamento cirúrgico do cysto hydatíco do fígado.” 11, 377-388.

622—Revista de Biologia e Hygiene.

- a. DREYFUS, A., 1937.—“Sobre o mecanismo de formação dos espermatozoides nas zonas testiculares da fôrma parasita de *Rhabdias fülleborni* Trav.” 8 (1), 5-9.
b. DREYFUS, A., 1937.—“A espermatogenese nos machos da geração de vida livre de *Rhabdias fülleborni* Trav.” 8 (1), 10-18.

623—Revista Brasileira de Medicina e Pharmacia.

- *a. SANTOS BARBOSA, S. DOS, 1937.—“Estudos sobre a schistosomose mansonii.” 12, 77-93.

624—Revista Brasileira de Tuberculose.

- *a. AMORIM, A., 1937.—“A proposito de um caso de kysto hydatíco suppurado do pulmão.” 6, 221-233.

625—Revista Chilena de Higiene y Medicina Preventiva.

- *a. NEGhme, A. & GASIC, G., 1937.—“Encuesta sobre ‘amebiasis’ y otras enteroparasitosis en los conscriptos del ejército de Chile.” 1937, pp. 46-48.
*b. NEGhme, A., 1937.—“La equinococcosis y otras enteroparasitosis de los perros vagos de Santiago.” 1937, pp. 60-62.

* Original not available for checking or abstracting.

626—*Revista de Chirurgie si Bulletins et Mémoires de la Société de Chirurgie de Bucarest.*

- *a. NASTA, T. & BLASSIAN, E., 1937.—“Kystes hydatiques multiples du foie.” 40, 133-135.
- *b. POENARU-CAPLESCO, C., 1937.—“Appendicite à trichocéphale et oxyures.” 40, 169-172.

627—*Revista de Gastro-Enterología de México.*

- *a. FLORES LÓPEZ, R., 1937.—“Algunas consideraciones sobre la distomatosis hepática (comunicación preliminar).” 2, 401-408.

628—*Revista Médica Cubana.*

- *a. GARCÍA RIVERA, A., 1937.—“Importancia del parasitismo intestinal por ascárides en la etiología de los abscesos hepáticos de los niños.” 48, 450-458.

629—*Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio.*

- a. BASNUEVO, J. G. & ANIDO, V., 1937.—“Solución aceto-formo-azucarada para el enriquecimiento de huevos de *Necator*.” 3 (3), 271-272. [Also in English pp. 272-273.]
- b. KOURÍ, P., BASNUEVO, J. G. & CALVÓ FONSECA, R., 1937.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia: Matanzas. Pueblos: Pedro Betancourt, Unión de Reyes, Jovellanos, Carlos Rojas, Cabezas y Los Arabos.” 3 (6), 481-496.
- c. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G., 1937.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia: Matanzas. Pueblos: Jagüey Grane, Perico, Martí, Arcos de Canasí, Sabanilla del Encomendador, San José de los Ramos, Limonar, Cidra y Agramonte.” 3 (6), 497-508.
- d. CALVÓ FONSECA, R., KOURÍ, P. & BASNUEVO, J. G., 1937.—“Porcentaje y distribución geográfica del parasitismo intestinal en Cuba. Provincia de Matanzas.” 3 (6), 509-513.

(629a) Basnuevo & Anido give details of a method for concentrating hookworm eggs with a solution composed of 10 c.c. acetic acid, 5 c.c. formalin, 250 c.c. water and 1 lb. sugar. About 3 g. of faeces are shaken up vigorously with the solution, coarse matter is sifted out, and the solution is then centrifuged for 10 minutes at high speed.

B.G.P.

630—*Revista de Medicina Veterinaria. Buenos Aires.*

- a. RENTERIA, J. R., 1937.—“Inspección y decomisos triquinosos. Estadística e inutilizaciones.” 19 (8), 569-583.

(630a) Renteria reviews the history of trichinosis inspection in the Argentine, and gives incidence figures for trichinosis in pigs from 1898 to 1933, generally about 3 pigs in a 1,000 being infected. The proportions of infections with live trichinae in pigs has decreased considerably in recent years. The differential diagnosis by macroscopic and microscopic methods from other muscle infections is discussed, and the criteria for confiscating infected pigs outlined.

V.D.V.S.

* Original not available for checking or abstracting.

631—Revista de Pediatrie și Puericultură.

- *a. AVRĂMOIU, P. & DÂNCILĂ, S., 1937.—[Intradermal reaction as diagnostic method in ascariasis.] 1, 413-417.

632—Revista Sanitară Militară. București.

- *a. NICOLEANU, C., 1937.—[Sudden death due to perforation of hydatid cyst of liver into bile ducts.] 36, 691-699.

633—Revista de Tuberculosis del Uruguay.

- *a. PIAGGIO BLANCO, R. A. & GARCÍA CAPURRO, F., 1937.—“Consideraciones sobre el diagnóstico radiológico de la equinocosis pulmonar múltiple.” 6, 95-104.

634—Revue Générale de Clinique et de Thérapeutique. Journal des Praticiens.

- a. LEDOUX, E., 1937.—“L'échinococcose alvéolaire du foie.” 51 (27), 437-440.
b. FIESSINGER, N. & BAUFLE, P., 1937.—“Un nouveau cas d'échinococcose alvéolaire franc-comtoise.” 51 (42), 689-691.

635—Revue de Médecine et d'Hygiène Tropicales.

- a. SAUTET, J. & PALAIS, M., 1937.—“Recherches expérimentales sur l'action de quelques produits sur les microfilaires en culture.” 29 (5), 241-245.
b. CHOISY, H. DE, 1937.—“Observation d'un cas de microfilariose loa traité par l'antimonio-thiomalate de lithium.” 29 (6), 294-296.

(635a) Sautet & Palais have tested the *in vitro* action of several dyes, quinoleine derivatives, and antiseptics on *Dirofilaria immitis*. Of these potassium permanganate and methylene blue were the most active, being lethal in solutions of 1 : 100,000. A 1 : 60,000 solution of Gonacrine proved useful for checking microbial growth in the cultures and thus allowing a longer life for the microfilaria. K.S.

(635b) de Choisy reports on the successful treatment of a long standing infestation of *Microfilaria loa* with Anthiomaline. Eleven doses varying from 2 c.c. to 4 c.c. each were given over a period of 3 weeks. Symptoms reappeared for very short periods during the following 3 months, but after that there was no recurrence of the disease. K.S.

636—Revue de Médecine Vétérinaire.

- a. BARNET, G., 1937.—“Un cas de sctarirose oculaire.” 89, 224-226.
b. LOMBARD, C., 1937.—“Contribution à l'étude anatomo-pathologique de la strongylose cardio-pulmonaire chez le chien.” 89, 525-530.

(636a) An immature *Setaria equina* occurred in the anterior chamber of the eye of a mule, causing keratitis. R.T.L.

* Original not available for checking or abstracting.

(636b) Lombard discusses the pathology of *Haemostrongylus* [= *Angiostrongylus*] *vasorum* disease in dogs. In the south-west of France he has found this disease in 7·8% of 269 dogs and in 15·8% of 133 bitches, of all ages. Macroscopically, the disease is characterized by numerous bluish-white plaques on the visceral pleura, and occasionally by the consistency of infested portions of the lungs—like soft rubber. Pulmonary sclerosis, concomitant broncho-pneumonia, "pipe-stem" pulmonary arteries, and pseudo-tubercles are all very rare or quite absent, the actual features being a chronic endarteritis and numerous small fibrous nodules in the lungs, together with hypertrophy of the right heart (or dilatation of the right with hypertrophy of the left). There may be valvular endocarditis, tricuspid and mitral. Hepatic cirrhosis and nephritis are not infrequent concomitants. B.G.P.

637—Revue Médicale du Centre-Ouest.

- *a. UFFERTE & BEIGBEDER, 1937.—"Tuberculose pulmonaire et parasitisme intestinal. Un cas de trichocéphalose." 9, 166-180.

638—Revue Médicale de Nancy.

- *a. RICHON, VERAINE, HARMAND, J. & LEICHTMANN, 1937.—"Méningite aigüe bénigne d'origine vermineuse (*Strongyloides stercoralis*)." 65, 704-707.

639—Revue d'Oto-Neuro-Ophtalmologie.

- a. DESOILLE, H., 1937.—"Les antihelminthiques, poisons sensoriels (visuels, auditifs et labyrinthiques)." 15, 170-173.
b. ALAJOUANINE, T., THUREL, R. & HORNET, T., 1937.—"Un cas anatomo-clinique de cysticercose méningée; (quelques considérations sur les arachnoïdites)." 15, 538-545.

640—Revue de Pathologie Comparée et d'Hygiène Générale.

- a. DÉVÉ, F., 1937.—"L'échinococcose alvéolaire chez l'homme et chez les animaux: l'échinococcose alvéolaire humaine en France." 37 (487), 453-472.
b. TISSERAND, G., 1937.—"Étude clinique de l'échinococcose alvéolaire du foie chez l'homme." 37 (487), 472-475.
c. CAUCHEMEZ, L., 1937.—"L'échinococcose multiloculaire des animaux." 37 (487), 475-486.

641—Revue du Service de Santé Militaire.

- a. FAUQUÉ, M. C. J., 1937.—"La parasitose intestinale méconnue en milieu militaire." 106, 751-768.

642—Revue Suisse de Zoologie.

- a. HÜBSCHER, H., 1937.—"Notes helminthologiques." 44 (4), 459-482.

(642a) The 27 species of *Hymenolepis* which have been reported from Insectivora are listed with a differential table of all except *Hymenolepis capensis*, of which the hooks are unknown. Short descriptions are given of 10 exotic

* Original not available for checking or abstracting.

species not listed by Joyeux & Baer in 1936 [see Helm. Abs., Vol. V., No. 410]. The 6 known species of *Hymenolepis* which occur in Chiroptera are similarly tabulated, followed by short descriptions of 2 known exotic species and *Hymenolepis kerivoulae* n. sp. from *Kerivoula picta* from Java. The paper concludes with descriptions of *Anomotaenia macropterygis* n. sp., *Paruterina javanica* n. sp. and *P. boviemi* n. sp. all from the Javan *Macropteryx longipennis*.

R.T.L.

643—Revue Vétérinaire Militaire.

- a. CANARD, 1937.—“Contribution à l'étude de l'habronémose gastrique et de ses complications.” 21 (3), 251-259.

(643a) During autopsies carried out on horses at Diégo-Suarez, Canard found that 90% showed tumours caused by *Habronema megastomum* and that, in 6 cases, death had resulted from the complications initiated by these lesions. The author discusses the etiology, pathology, treatment and prophylaxis of gastric habronemiasis and suggests that *Hippobosca equina* might be studied as a possible vector for this parasite. Prophylactic measures directed against insect carriers gave good results.

D.O.M.

644—Revue de Zoologie et de Botanique Africaines.

- a. SANDGROUND, J. H., 1937.—“Three new parasitic nematodes from the Belgian Congo.” 29 (3), 230-236.
 b. BERGHE, L. VAN DEN & VUYLSTEKE, C., 1937.—“Contribution à l'étude des parasites de l'okapi. (Deuxième partie).” 29 (4), 361-369.
 c. BERGHE, L. VAN DEN, 1937.—“Contribution à l'étude des parasites de l'okapi. (Troisième partie).” 30 (1), 117-139.

(644a) Three new nematodes are briefly described from the Belgian Congo, viz., (i) *Filaroides myonaxi* n. sp. from the lungs of a mongoose *Myonax sanguineus proteus*. (ii) *Seuratum congolense* n. sp. from the duodenum of the bats *Pipistrellus nanus* and *Myotis bocagei*. This nematode appears to be closely related to *Ophiostomum mucronatum*. (iii) *Echimuria minor* n. sp. from the proventriculus of the duck *Sarkidornis melanotus*. This form is distinguishable from *E. parva* by the reduced number of pre-anal papillae.

R.T.L.

(644b) Four nematode species are briefly recorded from the okapi, viz., *Parabronema congolense* n. sp., *P. skerjabini* var. *okapiae*, *Oesophagostomum rodhaini* and *Cooperia okapiae* n. sp.

R.T.L.

(644c) In five specimens of *Okapia johnstoni*, *Cotylophoron congolense* was very common. Four new bursate nematodes are described, viz., *Okapistrongylus epuluensis* n. g., n. sp., *Haemonchus okapiae* n. sp., *Anthostrongylus okapiae* n. sp., and *Ostertagia okapiae* n. sp. A list of species of protozoa and helminths hitherto recorded from the okapi is given. The paper contains a discussion of the parasites of the giraffe and the okapi. Of the helminths found in the okapis only three appeared to be of pathogenic importance, viz., *Monodontella okapiae*, *Haemonchus okapiae* and *Anthostrongylus okapiae*.

R.T.L.

645—Rhode Island Medical Journal.

- *a. SENSEMAN, L. A., 1937.—“*Strongyloides stercoralis*.” 20, 103-104.

646—Rhodesia Agricultural Journal.

- a. CAWSTON, F. G., 1937.—“Domesticated duck and fluke disease.” 34 (3), 239-240.
b. COLLINS, J. C., 1937.—“Notes on tobacco root-knot nematode.” 34 (5), 368-374.

(646a) Cawston finds that domesticated ducks keep down the numbers of *Limnaea natalensis* in ponds in South Africa. R.T.L.

(646b) Collins describes the disease symptoms caused by *Heterodera marioni* in tobacco: he gives measures for the control of the eelworm and the treatment of infected land suitable to conditions in Rhodesia. M.T.F.

647—Roentgen-Praxis.

- a. LAUBER, 1937.—“Zystizerken.” 9 (5), 340-341.
b. BRANSCHIED, F., 1937.—“Über die Behandlung des Echinococcus cysticus mit Röntgenstrahlen.” 9 (8), 552-555.

648—Schweizer Archiv für Tierheilkunde.

- a. GRIEDER, H., 1937.—“Strongyloidesseuche in zwei Nutriafarmen.” 79 (10), 475-480.
b. GRIEDER, H., 1937.—“Seltene Nutriaparasiten.” 79 (11), 520-525.

(648a) Reporting an infection with *Strongyloides papillosus* in nutria (coypu) on two fur-farms, Grieder gives details of treatment with the drug “Allisatin”, prepared from garlic, and with garlic itself. Neither was an effective anthelmintic but they had a general roborant effect. B.G.P.

(648b) Grieder records *Fasciola hepatica*, *Stichorchis waltheri* n. sp., *Echinococcus granulosus* cysts and *Filaria kitti* n. sp. from nutria. The animal containing *Stichorchis* was imported from the Argentine. R.T.L.

649—Scientific Monthly. New York.

- a. SCHWARTZ, B., 1937.—“Worm parasitism in domestic animals.” 44 (4), 338-349.

(649a) Schwartz summarizes the essential facts regarding the control of parasites and parasitic diseases of livestock. “The complete eradication of worm parasites of livestock is only a theoretical possibility, but . . . the reduction of the number of parasites to a point where they do comparatively little harm is a goal worth attaining.” R.T.L.

* Original not available for checking or abstracting.

650—Scientific Reports of the Australasian Antarctic Expedition, 1911-14. Series C. Zoology and Botany.

- a. JOHNSTON, T. H., 1937.—“Trematoda.” 10 (1), 29 pp.
- b. JOHNSTON, T. H. & BEST, E. W., 1937.—“Acanthocephala.” 10 (2), 20 pp.
- c. JOHNSTON, T. H., 1937.—“Cestoda.” 10 (4), 74 pp.
- d. JOHNSTON, T. H., 1937.—“Parasitic Nematoda.” 10 (5), 31 pp.

(650a) Johnston describes in detail and illustrates the two trematode species collected by the Expedition, viz., (i) *Pseudobenedenia nototheniae* from the head and body of *Notothenia macrocephala*, and (ii) *Ogmogaster antarctica* from the intestine of *Leptonychotes weddelli*. A.E.F.

(650b) Included among the 4 species of Acanthocephala from the Antarctic described by Johnston & Best is *Echinorhynchus zancloerhynchi* n. sp., from the stomach of *Zancloerhynchus spinifer*. The description is made from one female specimen only. A.E.F.

(650c) Johnston lists 21 species of cestodes from the Antarctic, including *Tetrabothrius mawsoni* n. sp. and *Monorygma macquariae* n. sp. The species are fully described and differentiated. The author considers *Monorygma macquariae* and *Phyllobothrium magnum* Hart, 1936 to be synonymous, and assigns the latter to *Monorygma* as *M. magnum*. A.E.F.

(650d) Johnston gives descriptions of 11 nematodes collected by the Expedition. There are 2 new species, viz., *Contracaecum antarcticum* n. sp. and *Paryseria adeliae* n. g., n. sp., both from *Pygoscelis adeliae*. A.E.F.

651—Sei-i-Kwai Medical Journal.

- *a. MORI, J., 1937.—“Beitraege zur Kenntnis der Entwicklungsgeschichte, speziell der biologischen Eigenschaften des *Paragonimus westermani*.” 56, 5-7.

652—Sitzungsberichte der Gesellschaft zur Beförderung der Gesamten Naturwissenschaften zu Marburg.

- a. MATTES, O., 1937.—“Abschliessender Bericht über die in den letzten Jahren im Marburger Zoologischen Institut durchgeführten Untersuchungen zur Aufdeckung des Entwicklungsganges des Lanzettegels.” 72 (2), 69-100.

(652a) Mattes gives a comprehensive review of the investigations on the life-cycle of *Dicrocoelium dendriticum* which have been carried out during the last few years at the University of Marburg. The most frequently infected snail hosts are *Helicella ericetorum*, *H. candidula* and *Zebrina detrita*, while 4 others, viz., *Ena obscura*, *Theba carthusiana*, *Abida frumentum* and *Euomphalia strigella* are also implicated. Unpublished work by Neuhaus shows that the cercariae reach the liver of the final host via the blood stream, a migration which is contrasted with that of *Fasciola hepatica* and of *Opisthorchis felinus*. As the extermination of the intermediate hosts by chemicals is too costly as well as inefficient, the author suggests that the collecting of the snails by hand might provide some measure of control. D.O.M.

* Original not available for checking or abstracting.

653—Skandinavisk Veterinär-Tidskrift.

- a. NORDSTRÖM, G., 1937.—“Mikrofilarios hos häst.” 27 (7), 355-364. [English summary p. 363.]

(653a) In Uppland, Sweden, microfilariae occurred in the blood of 60% of 40 yearling horses, in 15% of 26 two-year-olds and in 1 older horse. Some of the animals were apparently quite healthy, others displayed symptoms of intermittent diarrhoea, emaciation and defective development. R.T.L.

654—South African Medical Journal.

- a. CAWSTON, F. G., 1937.—“Recent advances in the cure of Bilharzia.” [Correspondence.] 11 (19), p. 703.

(654a) Cawston draws attention to the value of Anthiomaline as an intramuscular injection for the treatment of Bilharzia infection. R.T.L.

655—Sovetskiy Vrachebniy Zhurnal.

- *a. ALEKSANDROV, K. A., 1937.—[Helminthiasis among food handlers.] 41, 703-706.
*b. TARASSOV, V., 1937.—[Preliminary report on immunity against tapeworm.] 41, 1473-1478.

656—Spisy Vysoké Školy Zvěrolékařské, Brno.

- a. ERNEK, E., 1937.—“Štúdia o nálezu parazitárných vajíčok v trusu koní.” 14, 71-83. [German summary pp. 82-83.]
b. MATOUŠEK, J., 1937.—“Studium o možnosti intrauterinní infekce škrkavkou koňoksu.” 14, 153-165. [German summary pp. 163-164.]

(656a) Ernek states that the number of ascarid eggs found in horse faeces is not a true indication of the number of adults in the intestine. The intestine of young horses may be full of worms while eggs are entirely absent from the faeces. An increase in the number of ascarid eggs was found to be always accompanied by a decrease in the number of cyclostome eggs. A.E.F.

(656b) In an attempt to establish the fact of pre-natal infection in the horse with the larvae of *Parascaris equorum*, Matoušek has examined the lungs, liver and alimentary tract of 10 premature births and one full-time foal which survived only 19 hours. He further examined the meconium of 50 new-born foals. Although his results were entirely negative Matoušek points out that the possibility of such pre-natal infection is not excluded. A.E.F.

657—Stain Technology.

- a. WOTTON, R. M., 1937.—“The application of glychrogel mounting for trematodes.” 12 (4), 145-146.

(657a) Wotton describes the mounting of stained specimens of the trematode *Pneumonoeces medioplexus*, from the lungs of *Rana pipiens*, in glychrogel, a gelatine-glycerine mounting medium. The flukes are transferred from water or weak glycerine to a large drop of the warmed mountant

* Original not available for checking or abstracting.

and are then covered with a coverslip. Delicate objects are not injured by the medium. T.G.

658—Surgery.

- a. DEW, H. R., 1937.—“Some aspects of echinococcus disease.” 2 (3), 363-380.

(658a) Dew gives an admirable summary of our knowledge of hydatid diseases in man, describing the development of the cyst, its clinicopathological aspects of both uncomplicated cysts and complicated cysts. Practically all the complications result from an escape of fluid from the cyst. This may be a slight leak or there may be a rupture. The sequelae may be (i) *general* with immediate hydatid anaphylaxis, or delayed, with secondary echinococcosis or (ii) *special* where rupture occurs into a natural channel with immediate mechanical effects, or delayed, from death of the cyst with or without suppuration. A table sets out the protean nature of the clinical symptoms due to anaphylaxis and illustrates the risks of indiscriminate puncture of a hydatid cyst. Many cases of multiple cysts are due not to multiple primary infestations but to secondary cyst formations from implanted scolices. The varied effects of rupture are detailed. Diagnostic methods receive brief mention, while for details on treatment the reader is referred to Dew's “Hydatid disease” (1928). R.T.L.

659—Svenska Läkartidningen.

- *a. LUNDMARK, F., 1937.—[Five cases of trichinosis.] 34, 867-876.
 *b. HALLÉN, L. E., 1937.—[Epidemic of trichinosis in Lindesberg at end of May and beginning of June, 1937.] 34, 1020-1026.

660—Taiwan Igakkai Zasshi.

- a. MATSUMOTO, T., 1937.—“On a nematode found in the lungs, especially in the pulmonary artery, of the wild rat.” 36 (12), 2620-2622. [In Japanese: English summary p. 2623.]

(660a) [For abstract of this paper see Helm. Abs., Vol. VI, No. 379a.]

661—Technical Bulletin. University of Minnesota Agricultural Experiment Station.

- a. BOUGHTON, R. V., 1937.—“Endoparasitic infestations in grouse, their pathogenicity and correlation with meteorotopographical conditions.” No. 121, 50 pp.

(661a) Boughton gives redescrptions, mostly illustrated, of 4 cestodes, 7 nematodes, 2 trematodes and 2 species of *Eimeria* from 560 ruffed grouse (*Bonasa umbellus*) and 62 sharp-tail grouse (*Pedioecetes phasianellus campestris*) mainly from Minnesota, and discusses their possible influence on fluctuations in the grouse population. [*Trichostrongylus* is not represented.] Total incidence fluctuated from 36.5% in 1931-32 to 73.8% in 1933-34. *Ascaridia galli*, *Cheilospirura spinosa*, *Railletina tetragona* and the *Eimeria*

* Original not available for checking or abstracting.

spp. are considered potentially dangerous, but losses in adult grouse are not ascribed primarily to parasites. On the other hand *R. tetragona* may cause death in birds 4 days old. In the case of the ruffed grouse there is correlation between incidence of parasitism and such factors as precipitation, temperature, predominant vegetation, and soil type.

B.G.P.

662—Therapie der Gegenwart.

- a. UNVERRICHT, W., 1937.—“Pathogenetische Bedeutung und Behandlung der Darmparasiten.” 78 (2), 49-53.

(662a) Unverricht briefly discusses the pathology and treatment of parasitosis due to cestodes, Strongyloides and hookworm, Ascaris, Trichuris and Oxyuris.

B.G.P.

663—Transactiones Societatis Pathologicae Japonicae.

- a. KON, Y., 1937.—“Demonstration über einen typischen Alveolarechinokokkus der Leber.” 27, 622-624.

664—Transactions of the Hawaii Territorial Medical Association.

- a. ALICATA, J. E., 1937.—“A study of trichinosis and infectious jaundice in the Hawaiian Islands.” 47th Annual Meeting, pp. 95-103.
b. LARSEN, N. P. & SHINN, J., 1937.—“Observations on hookworm in Hawaii.” 47th Annual Meeting, pp. 104-111.

(664a) [A fuller account appears in Public Health Reports, Washington, 53 (10), 384-393; see Helm. Abs., Vol. VII, No. 52b.]

665—Transactions of the Royal Society of Canada.

- a. WARDLE, R. A., GOTSCHALL, M. J. & HORDER, L. J., 1937.—“The influence of *Diphyllbothrium latum* infestation upon dogs.” 3rd Series, Section 5, 31, 59-69.

(665a) Experimental infections of dogs with *Diphyllbothrium latum* over periods of one to 13 weeks were not found to cause any significant change in serum calcium and plasma phosphorus. The blood picture was similar to that recorded by other workers on human cases. The red cell count and haemoglobin content showed decline after the 6th week, but no change in white cell count could be attributed to the infections.

J.W.G.L.

666—Trudi Soveta po Izucheniyu Proizvoditelnuikh Sil, Seriya Turkmenskaya.

- a. STROM, J., 1937.—“A new roundworm of birds *Cardiofilaria pavlovskyi* n. gen., n. sp.” 1937, No. 9, 217-221. [In Russian: English summary p. 221.]

(666a) Strom describes and figures *Cardiofilaria pavlovskyi* n. g., n. sp., from the pericardial cavity of *Oriolus oriolus kundoo*. The new genus is placed in the subfamily Aprocinae of the Filariidae.

A.E.F.

667—Tunisie Médicale.

- a. DELASTRE & COURSIÈRES, 1937.—“Echinococcose abdominale multiple. Extirpation de 5 kystes.” 31 (6), p. 250.

668—Vestnik Khirurgii.

- *a. NAPALKOV, N. I., 1937.—[Alveolar echinococcosis.] 50, 63-67.

669—Vestnik Oftalmologii.

- *a. VARSHAVSKIY, Y. K., 1937.—[Alveolar echinococcosis of conjunctiva.] 10, 415-418.
*b. OCHAPOVSKAYA, N. V., 1937.—[Ocular filariasis in Russia.] 10, 606-608.

670—Veterinarija ir Zootechnija.

- a. SNIČKIENE, P., 1937.—“Sidabrinių lapių plaučių nematodai ir kova su jais jod-jodkalio skiedinio intratrachejiniais išvirkštimais.” 14 (1), 1-13. [German summary pp. 12-13.]

(670a) Sniečkienė found that 66.7% of silver foxes examined in Lithuania harboured *Eucoleus aerophilus*. On one large farm there was a mortality of 29.7% among young foxes in 1935. Treatment intratracheally with iodine and potassium iodide solution reduced the mortality rate from 51.0 to 12.3%, but was responsible for an increase of sterility among the foxes. A.E.F.

671—Veterinarski Arhiv.

- a. EHRLICH, I., 1937.—“Kutikula kao mehanički uvjetovana diferencijacija epidermalnog sincicija kod nematoda *Toxocara cati* (Schränk, 1788).” 7 (9), 438-457. [German summary pp. 456-457.]

(671a) By means of a new staining technique involving the use of fuchsin and picric acid, Ehrlich has examined the structure of the cuticle of *Toxocara cati*. He establishes the presence of a branching system of fine fibrils as described originally by Bömmel. He shows that the structure is well adapted to withstand the physiological and mechanical forces which bear upon it, without being in any way bulky. It allows of osmosis from the outside and is sufficiently elastic to meet the forces arising from the contractions of the worm itself. P.A.C.

672—Veterinary Journal.

- a. HUDSON, R., 1937.—“Parasitic enteritis in a mare.” 93 (5), 189-190.
b. CAWSTON, F. G., 1937.—“Bilharzia disease in the Union of South Africa.” 93 (9), 334-336.
c. HUDSON, R., 1937.—“Parasitic bronchitis—husk or hoose.” 93 (9), 340-342.
d. TAYLOR, E. L., 1937.—“Parasitic gastritis. The transference of the causative helminths from sheep to cattle.” 93 (10), 353-355.
e. CAMERON, T. W. M., 1937.—“Trichinosis—a public health problem.” 93 (12), 439-441.

* Original not available for checking or abstracting.

(672a) Hudson records the clinical symptoms and post-mortem findings of a six-year-old shire mare (in foal) with parasitic enteritis. The wall of the large colon was very thickened and parasitic emboli were found in the coeliac axis and mesenteric vessels. J.W.G.L.

(672c) Hudson's treatment of husk in lambs and cattle consists of an intratracheal injection of: phenol 5 minims, turpentine 15 minims, chloroform 8 minims and olive oil 1 dram, given in doses of up to one dram for lambs and 2 to 3 drams for calves 6 to 12 months. The method of injection and the type of syringe used is described. J.W.G.L.

(672d) Taylor shows experimentally, by grazing yearling cattle on pasture heavily infected with sheep trichostrongyles, that not only can these parasites of sheep parasitize cattle, but that the disease "parasitic gastritis" can also be transferred. J.W.G.L.

673—Veterinary Medicine.

- a. MIZELLE, J. D., 1937.—"Resistance to helminth parasites in domestic animals." 32 (4), 168-170.
- b. BAYLES, G. W., 1937.—"Strongylosis in a colt." 32 (4), p. 200.
- c. LUCKER, J. T. & SCHAFFER, J. M., 1937.—"The effect of certain volatile halogenated hydrocarbons on the eggs and larvae of nematodes in horse manure." 32 (12), 564-569.

(673a) Preliminary paragraphs discuss the popular meaning of parasitism and Mizelle then continues by mentioning the various degrees of resistance, viz., immunity, tolerance and premunition. Helminthic resistance is considered in the light of the work of Kerr & Petkovich (1935) on active immunization of rabbits against *Fasciola hepatica*, of H. M. Miller showing significant active and passive resistance in rats to *Taenia taeniaeformis*, and of McCoy (1931) reporting host resistance in dogs to hookworm shown by the passage of adults when infective larvae were still being fed. J.W.G.L.

(673b) Bayles gives the clinical symptoms, treatment, and the blood examination of a fatal case of strongylosis in a two-year-old filly. J.W.G.L.

(673c) Lucker & Schaffer tested in closed vessels, in the laboratory, the vapours of dichloropentanes, ethylene dichloride, carbon tetrachloride and commercial mixtures as destructive agents against horse strongyle eggs and larvae in faeces. The time of exposure ranged between 23 and 90 hours, and results were based on the number of infective larvae recovered by the Baermann technique after appropriate culturing. 0.5 to 1.0 c.c. of dichloropentanes per 100 g. of faeces killed nearly all strongyle eggs and pre-infective larvae; ethylene chloride and carbon tetrachloride and a mixture of the two in the proportion of 1 to 3 was slightly less effective. 2 c.c. of ethylene chloride or carbon tetrachloride was very effective in destroying infective larvae in 100 g. of horse faeces. J.W.G.L.

674—Veterinary Record.

- a. FUNDAMINSKI, I., 1937.—"Two interesting cases of dysentery in dogs." 49 (25), 766-767.

(674a) Haemorrhagic colitis in two dogs disappeared after treatment by Nemural which expelled *Dipylidium caninum*. J.W.G.L.

675—Virginia Medical Monthly.

- a. WRIGHT, W. H., BOZICEVICH, J. & ROSE, J., 1937.—“Studies on oxyuriasis. II. A preliminary note on treatment with tetrachlorethylene.” 64 (6), 339-341.

(675a) Treating a preliminary series of 11 oxyuriasis cases with tetrachlorethylene, Wright et al. found that 6 gave negative peri-anal swabs after treatment. The dose was at the rate of 0.1 c.c. for each year of apparent age for children under 12, and was adjusted to circumstances in older children.

B.G.P.

676—Vlaamsch Diergeneeskundig Tijdschrift.

- *a. THOONEN, J., VERSTRAETE, A. & BOUCKAERT, J., 1937.—“Ascarisinfestatie bij het varken.” 6, 77-81.

677—Vrachebnoe Delo.

- *a. EKELOV, M. M., 1937.—[Case of ascariasis of liver and bile ducts.] 20, 241-242.
 *b. DADASHYAN, A. M., 1937.—[Case of strongyloidosis.] 20, 479-480.
 *c. BERKMAN, I. I., 1937.—[Opisthorchiasis in etiology of diseases of liver and bile ducts.] 20, 625-628.

678—Wiadomości Weterynaryjnych.

- a. SITOWSKI, L., 1937.—“Goździk ogrodowy jako środek leczniczy przeciw robakom kota.” 16 (203), 227-228. [In Polish: German summary p. 228.]
 b. ŁUKASIAK, J., 1937.—“Robaki pasożytnicze u kotów w Warszawie i jej okolicach.” 16 (206), 321-342. [In Polish: French summary p. 342.]
 c. RAYSKI, C., 1937.—“O występowaniu u psów w okolicach Warszawy gatunku *Ancylostoma caninum* (Ercolani, 1859).” 16 (206), 343-349. [In Polish: French summary pp. 348-349.]

(678a) The author observed a cat, infected with *Taenia taeniaeformis*, eating the leaves of a pink (*Dianthus* sp.) grown in a flower pot. After a short time it vomited 3 dead specimens of *T. taeniaeformis* and one of *Toxocara cati*. Since both of these parasites live in the intestine the leaves must have had an antiperistaltic effect. *Dianthus* has not up till now been recognized as a remedy for intestinal worms. The active principle, if any, is probably *Dianthus*-oil.

R.T.L.

(678b) The following helminths were obtained from cats in and around Warsaw: the trematodes *Opisthorchis felineus*, *Echinochasmus perfoliatus* and *Alaria alata*; the cestodes *Mesocestoides lineatus*, *Dipylidium caninum*, *Taenia taeniaeformis* and *Diphyllobothrium latum*; and the nematodes *Toxocara mystax*, *Toxascaris leonina*, *Ancylostoma caninum*, *Uncinaria stenocephala*, *Capillaria aerophila*, *C. felis cati*, *Aelurostrongylus abstrusus* and *Ollulanus tricuspis*. The last two have not been recorded previously for Poland.

R.T.L.

* Original not available for checking or abstracting.

(678c) In 100 post-mortems of dogs from the neighbourhood of Warsaw, 3 harboured *Ancylostoma caninum* while *Uncinaria stenocephala* was very common, due apparently to the lower temperature required by its larva for development. R.T.L.

679—Wiener Archiv für Innere Medizin.

- a. SCHEPPACH, K., 1937.—“Ein Fall von Zystizerkose.” 30, Suppl., 28-31.

(679a) Scheppach briefly reports a case of Cysticerciasis cellulosa in man. Most of the cysts were subcuticular, but epileptiform symptoms were present. There was no fixation of complement and no evidence of infection with *Taenia solium* adults. B.G.P.

680—Wiener Tierärztliche Monatsschrift.

- a. KOULIKOFF, N. S., 1937.—“*Diocotophyme renale* in der Bauchhöhle eines Hundes.” 24 (8), 234-235.

681—Zeitschrift für Infektionskrankheiten, Parasitäre Krankheiten und Hygiene der Haustiere.

- a. SCHIEL, O., 1937.—“Ergebnisse der Wilduntersuchungen im Veterinär-Untersuchungsamt Oppeln aus den Jahren 1925 bis 1936.” 52 (2/3), 180-186.

(681a) Schiel reports on the post-mortem examination of 127 wild animals comprising rodents, deer, birds, and a wild boar. The records include lungworms in red deer and roe-deer, hydatid in roe-deer, stomach worm in hare, and tapeworms in partridge. B.G.P.

682—Zeitschrift für Kinderheilkunde.

- a. SEIDL, O., 1937.—“Ein Fall von Lungenechinococcus bei einem Kinde.” 59 (3), 427-430.

683—Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz.

- a. MÜLLER, W., 1937.—“Das Blattälchen des Tabaks.” 47 (8), 447-452.

(683a) Müller has found a leaf-blotch on leaves of tobacco (*Nicotiana Tabacum* L.), caused by the eelworm, *Aphelenchoides ritzema-bosi*, in certain areas of Württemberg and Baden, Germany. T.G.

684—Zeitschrift für Vergleichende Physiologie.

- a. HARNISCH, O., 1937.—“Zellfrei arbeitendes Oxydant im Gaswechsel von *Ascaris lumbricoides* und einigen Cestoden.” 24 (5), 667-686.
b. KRÜGER, F., 1937.—“Bestimmungen über den aeroben und anaeroben Stoffumsatz beim Schweinespulwurm mit einem neuen Respirationsapparat.” 24 (5), 687-719.
c. OESTERLIN, M., 1937.—“Die von oxybiotisch gehaltenen Ascariden ausgeschiedenen Fettsäuren.” 25 (1), 88-91.

(684a) Harnisch has demonstrated the presence of oxidising enzymes in the body fluid and tissue extracts of *Ascaris* and some cestodes. It is probable that these have a marked influence on the oxybiotic metabolism of the worms, which normally live under anaerobic conditions. R.H.H.

(684b) Krüger has carried out experiments *in vitro* on the respiration of *Ascaris*. In general the metabolic rate was higher the smaller the worm. Intake of O₂ and output of CO₂ and fatty acids varied with O₂ tension. The production of fatty acids was a maximum with a low O₂ tension, but was smaller with a high O₂ tension than in the absence of O₂. Under anaerobic conditions the molecular ratio of CO₂ to fatty acid varied from 3.5 to 11.1, with an average of approximately 5. In the presence of about 5% of O₂ this fermentation quotient fell to approximately 4, due to an increased secretion of fatty acids. R.H.H.

(684c) Oesterlin obtained ether extracts of the products excreted by pig ascarids under oxybiotic conditions. Fractional distillation led to the separation of formic, acetic and valeric acids, and probably of butyric acid. In addition small quantities of higher acids were obtained but these were not identified. The chief excretory product was valeric acid. R.H.H.

685—Zentralblatt für Chirurgie.

- a. KIRNMANN, E., 1937.—“Ein seltener Fall von Pankreasnekrose, verursacht durch die *Taenia saginata*.” 64 (26), 1529-1531.

686—Zentralblatt für Gynäkologie.

- a. MISSIRLOGLOU, A. & ANAGNOSTIDIS, N., 1937.—“Ein Fall von primärem Echinokokkus des Uterus.” 61 (22), 1297-1299.

687—Zoologica. New York.

- a. STUNKARD, H. W. & MILFORD, J. J., 1937.—“Notes on the cestodes of North American sparrows.” 22 (2), 177-183.
b. NIGRELLI, R. F., 1937.—“Further studies on the susceptibility and acquired immunity of marine fishes to *Epidella melleni*, a monogenetic trematode.” 22 (2), 185-192.

(687a) Stunkard & Milford have collected cestode material from sparrows (*Passer domesticus*) in Alabama which seems to be *Choanotaenia passerina*. There is a single cirlet of hooks on the retracted rostellum, though when this is extruded the arrangement becomes somewhat alternating and thus simulates a double row. The uterus is initially sacciform, later anastomosing and finally dividing into small chambers. P.A.C.

(687b) Nigrelli has shown that immunity to *Epidella melleni* may be acquired by *Trachinotus carolinus* and *T. falcatus*, two fish normally highly susceptible to infection. This immunity is induced by repeated exposure to infection. Complete immunity sometimes occurred after 2 exposures and persisted for many months—in one case over a year. The host then died. He has very little evidence that humoral antibodies are produced, for his results following injections of dried or fresh worm material or immune sera are not conclusive. He found that the mucus excreted by certain fish,

artificially or naturally immune to infection, contained some substance inimical to the parasite. When placed in contact with such mucus they died within a few hours.

P.A.C.

688—Zoologica Poloniae. Lwow.

- a. STRANKOWSKI, M., 1937.—“Badania anatomiczne nad *Polystoma ocellatum* Rud.” 2 (1), 1-20.
- b. WIŚNIEWSKI, L. W., 1937.—“O wychodzeniu cercaryj ze ślimaków.” 2 (1), 67-97.

(688a) [Anatomical researches on *Polystoma ocellatum*.]

(688b) [The escape of cercariae from snails.]

689—Zoologischer Anzeiger.

- a. SZIDAT, L., 1937.—“*Archigetes* R. Leuckart 1878, die progenetische Larve einer für Europa neuen Caryophyllaeiden-Gattung *Biacetabulum* Hunter 1927.” 119 (5/6), 166-172.

(689a) Szidat has found, in the intestine of tench, 4 trematode-like organisms which are actually monozootic cestodes of the (hitherto American) genus *Biacetabulum* Hunter (family: Caryophyllaeidae). From structural details he is convinced that *Archigetes sieboldi* Leuck., in the body cavity of Tubificidae, is the progenetic larva of this same worm, the most outstanding difference being that the sexually mature larva retains the caudal appendage bearing the 6 embryonic hooks. Szidat names his worms “*Biacetabulum sieboldi* n. sp.” [n. comb.], arguing that *Archigetes* Leuck. as a European genus cannot claim priority over *Biacetabulum* Hunter, which was based on American material; *Archigetes* should therefore fall into synonymy, its species being all larvae of *Biacetabulum*.

B.G.P.

690—Zoologiska Bidrag från Uppsala.

- a. NÄSMARK, K. E., 1937.—“A revision of the trematode family Paramphistomidae.” [Inaugural Dissertation, Uppsala], 16, 301-565.

(690a) In a monograph of 264 pages illustrated by 103 text figures and 13 photogravure plates Näsmark reviews the whole of the Paramphistomidae. The work is divided into two parts. Part I deals with (i) the acetabulum and the connection between the different acetabular types, (ii) the question is there an oral sucker or pharynx? (iii) the pharynx types, (iv) the genital atrium and its types. Part II contains a critical survey of the systems of classification hitherto proposed, followed by a survey of the subfamilies and a discussion of their relationships. Näsmark is of opinion that Stunkard's system of classification (1925) is probably the most accurate and this is followed by him with modifications. The family Paramphistomidae has to be divided into 15 subfamilies arranged in 3 groups, viz., (i) containing 8 subfamilies whose species inhabit water vertebrates; (ii) with 2 subfamilies parasitic in even-toed Ungulates from Ethiopian and Indian countries and from parts of the Holarctic region; (iii) embracing 5 subfamilies in Ungulates, elephants and Primates from Ethiopian and Indian regions. Under each subfamily the genera and species are systematically dealt with and the work ends with a very extensive bibliography.

R.T.L.

NON-PERIODICAL LITERATURE.

- 691—ALLEN, C. E., 1937.—“The ova of *Ascaris megalocephala*.” Melbourne, 115 pp.

Writing as a dentist, Allen propounds a new theory of the embryology of *Parascaris equorum* which, if true, would destroy all the fundamental notions of classical cytology, genetics and embryology. The theory aims ultimately at a new approach to the problem of the aetiology of cancer. The book consists of a series of microphotographs of ascarid ova from the oviduct [here called “ovary”] and uterus, together with highly original interpretations of them.

B.G.P.

- 692—*BROGNIART, M., 1937.—“Recherches sur le parasitisme intestinal dans les écoles maternelles.” Thèse, Paris.

- 693—CRAIG, C. F. & FAUST, E. C., 1937.—“Clinical parasitology.” London, 733 pp.

- 694—DORY, J., 1937.—“Nachweis von Helmintheninvasionen mit Hilfe serologischer Methoden unter besonderer Berücksichtigung der Präzipitation bei Trichinose.” Dissertation, Hannover, 37 pp.

Using 3 different antigens, manufactured by different methods, Dory has not yet evolved a reliable precipitation technique for the diagnosis of trichinosis in guinea-pigs, rabbits and pigs. He suggests that for meat inspection purposes a microscopical investigation of the flesh is still necessary, though in suspected human cases this test when used in conjunction with cutaneous reactions, clinical symptoms and the like may have a use.

P.A.C.

- 695—*DUMONT, E., 1937.—“Beitrag zur Differentialdiagnose parasitärer und nichtparasitärer Gebilde bei der mikroskopischen Untersuchung des Schweinekotes.” Inaugural-Dissertation, Hannover.

[For abstract of this paper see Helm. Abs., Vol. VI, No. 41a.]

- 696—DUNNING, W. F., CURTIS, M. R. & BULLOCK, F. D., 1937.—“The respective rôles of heredity and somatic mutation in the etiology of tumors induced by parasites and chemical irritants.” In: “Some fundamental aspects of the cancer problem.” New York, pp. 29-36.

- 697—FAUST, E. C., 1937.—“Mammalian heart worms of the genus *Dirofilaria*.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 131-139.

Faust has studied “heart-worms” from *Canis familiaris*, *C. floridanus*, *Vulpes vulpes*, *Felis catus domestica* and *Zalophus californianus*. There are ample grounds for grouping into a separate subgenus, *Dirofilaria* nov., the forms which inhabit the heart and pulmonary vessels, viz., *D. immitis*, *D. magalhaesi*, *D. pongoi* and *D. spirocauda* (= ? *D. immitis*), and the tissue-inhabiting forms under a new subgenus *Nochtiella* with *D. repens* as type. In *Nochtiella* the specimens are smaller, there is marked bilateral asymmetry in the number and arrangement of the caudal papillae, and the larger spicule is more acuminate terminally.

R.T.L.

* Original not available for checking or abstracting.

- 698—FENG, L. C., 1937.—“Attempts to immunize dogs against infection with *Dirofilaria immitis* Leidy, 1856.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 140-142.

Feng was able to infect dogs experimentally with *Dirofilaria immitis* by subcutaneous injections of infective larvae obtained by dissecting *Aedes koreicus*. He was not able to induce resistance to infection by a series of injections of an emulsion containing 2 g. dried male worms. P.A.C.

- 699—FROILANO DE MELLO, I., 1937.—“On blood microfilaria of Indian birds.” Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 1533-1550.

27 new forms of microfilariae are described from 22 out of 83 different species and varieties of Indian birds. All the new species are recorded as belonging to the genus “*Microfilarium*.” R.T.L.

- 700—FROILANO DE MELLO, I., 1937.—“Sur les mollusques indiens pouvant servir d'hôtes éventuels dans la transmission de la bilharziose urinaire.” Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 2084-2095.

Only one case of urinary bilharziasis has been acquired at Valpoi, in Portuguese India, although African troops infected with *S. haematobium* and *S. mansoni* have been stationed there since 1912. *Melanoides tuberculatus* and *Limnaea luteola* are open to suspicion as occasional vectors there. R.T.L.

- 701—FUHRMANN, O., 1937.—“Un cestode extraordinaire, *Nematoparataenia southwelli* Fuhrmann.” Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 1517-1532.

Fuhrmann gives a detailed description, with figures, of *Nematoparataenia southwelli*. Its morphology is entirely different from that of any other known cestode. It has no segmentation and the genitalia are unique, resembling that of the Cestodaria and the Caryophyllaeidae. The generic diagnosis of *Nematoparataenia* is revised, with *N. paradoxa* Maplestone & Southwell as type species and *N. southwelli* the only other member of the genus. Fuhrmann proposes the new order APORIDEA, with the characters of the genus and family. A.E.F.

- 702—GOLDSCHMIDT, R., 1937.—“Ascaris: the biologist's story of life.” New York, ix+390 pp.

Taking *Ascaris* as a type, Goldschmidt expounds in a popular manner the functions, growth and evolution of animal life. “As I try to set my mind again upon the story of our worm, *Ascaris*, a little incident of my high school days flashes through my mind” and so the author wanders far and often afield. It is an entrancing story. But it would have been equally informing and delightful if the author had completely forgotten to mention *Ascaris* to the public and the publisher. R.T.L.

- 703—GÖNNERT, R., 1937.—“Zur Frage der Artzugehörigkeit von *Filaria mavis* Leiper, 1909.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 159-162.

Filaria mavis Leiper, 1909 from the thrush *Turdus musicus* is redescribed and placed in Aprocinae as type of a new genus *Ornithofilaria*. It is differentiated from *Aprocta* by (i) transverse striation of cuticle (ii) a patent anus (iii) females are viviparous and (iv) the worms do not inhabit the orbital and nasal sinuses.

R.T.L.

- 704—HOEPLI, R. & CHU, H. J., 1937.—“Studies on *Clonorchis sinensis* in vitro.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 199-203.

Clonorchis sinensis has been kept alive for five months in serum of horse, rabbit, cat or man, diluted with an equal amount of Tyrode solution and also in undiluted heparinized rabbit plasma. The pH of the medium should range between 7 and 8. No normal growth occurred in these artificial media even when immature worms were used. Attempts to obtain growth and development of metacercariae and immature *Clonorchis* in a great variety of media and conditions were negative.

R.T.L.

- 705—HOLZER, G., 1937.—“Przyczynek do rozpoznawania niektórych gatunków pasożytów w przewodzie pokarmowym koni za pomocą odczynu strącania (precipitacji). (Beitrag zum Nachweis mancher Parasiten im Verdauungskanal des Pferdes mittels der Präzipitationsreaktion).” Dissertation, Lwów, 18 pp.

Holzer recommends the routine use of the precipitation reaction for the diagnosis of helminth parasites in horses, particularly in the case of transport and remount horses of an army. By this means infestations can be recognized early, before clinical symptoms have appeared. He claims that early diagnosis will prevent long-period disablement.

P.A.C.

- 706—HSÜ, H. F. & KHAW, O. K., 1937.—“Studies on certain problems of *Clonorchis sinensis*. III. On the morphology of the metacercaria.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 216-220.

A detailed description of the metacercaria of *Clonorchis sinensis* is given. The morphological differences from the metacercaria of *Opisthorchis felineus* are tabulated.

R.T.L.

- 707—*JACQUET, J., 1937.—“Contribution à l'étude de l'immunité dans les infestations intestinales par les nématodes, en relation avec le problème de leur spécificité parasitaire.” Thèse, Paris.

- 708—JOHANNSEN, H., 1937.—“Beitrag zur Klärung der Wanderung der *Strongylus equinus*-Larven im Tierkörper. (Versuche an weissen Mäusen).” Inaugural-Dissertation, Hannover, 61 pp.

Johannsen finds from experiments on white mice with pure cultures of *Strongylus equinus* larvae that: (i) *Strongylus equinus* larvae pass the stomach unchanged. Ecdysis takes place in the small intestine. (ii) The larvae penetrate the walls of the caecum and large intestine causing macroscopically

* Original not available for checking or abstracting.

demonstrable lesions. (iii) Some of the larvae which reach the abdominal cavity are surrounded and killed by round cells. (iv) Some of the larvae penetrate into the mesentery and migrate to the pancreas and liver. (v) The larvae may reach the pancreas and liver direct. (vi) No evidence was obtained that larvae migrate through blood or lymph vessels. (vii) During their migrations the larvae undergo metamorphosis, but no signs of ecdysis could be found. (viii) Attempts to induce a weakening of host resistance by means of injections of horse serum were unsuccessful. (ix) These results agree on the whole with those obtained in the normal host. R.T.L.

- 709—KAN, H. C. & VOGEL, H., 1937.—“Untersuchungen über die Übertragung von *Clonorchis sinensis* in dem Gebiete von Canton, China.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 225-233.

The methods of fish culture in the province of Kwangtung are briefly reviewed. *Ctenopharyngodon idellus* is the chief source of human infection with *Clonorchis* in the neighbourhood of Canton. Three species of *Bithynia* occur around Canton, viz., *B. striatula*, *B. longicornis* and *B. robusta minor*. Numerous specimens were collected during the winter months but all failed to discharge cercariae spontaneously. R.T.L.

- 710—KATSURADA, F., 1937.—“Nachtrag zur Kenntnis der Biologie und der pathogenen Bedeutung der Trematoden.” Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 234-239.

Using *Metorchis oesophagolongus*, *Paracoenogonimus ovatus*, *Metagonimus katsuradai*, *Petasiser linguiformis*, *Echinochasmus japonicus*, *Stamnosoma* spp. and *Exorchis oviformis* as illustrations, Katsurada concludes that (i) a trematode can occasionally parasitize an animal not its normal definitive host and set up severe pathological symptoms (ii) when trematodes parasitize an abnormal definitive host their development may remain incomplete. R.T.L.

- 711—KHALIL, M., 1937.—“The life-history of the human trematode parasite *Heterophyes heterophyes*.” Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 1989-1998.

Khalil shows that the first intermediary of *Heterophyes heterophyes* is a snail, *Pirenella comica*. The cercariae, which are lophocercous, are known to encyst in *Mugil cephalus*. Other *Mugil* spp. and—more rarely—*Tilapia* spp. are also intermediaries. In the laboratory encystment took place in *Gambusia affinis*. The metacercaria completes its development in 20 days. The adult begins to deposit ova after 9 days. Dogs and cats are infected by eating parasitized fish. A.E.F.

- 712—*KNOLL, D., 1937.—“Contribution à l'étude du parasitisme intestinal au cours de la première enfance.” Thèse, Paris.

- 713—KRAFT, E., 1937.—“Beitrag zur Bekämpfung der Wurmkrankheiten der Pferde.” Inaugural-Dissertation, Leipzig, 70 pp.

After briefly reviewing the strongyles and ascarids of horses, their life-history, pathogenesis and anthelmintic treatment, Kraft describes his

* Original not available for checking or abstracting.

own experiments with the drugs "Strongylon" (an organic arsenic compound) and "Ciffkapseln" (a mixture of carbon tetrachloride and arsenic). "Strongylon" was well tolerated and reasonably efficacious: of 95 treated horses, 39 showed no strongyle eggs after a single treatment and 50 showed a marked reduction in number of eggs. This drug has little or no effect on *Ascaris*, so that in mixed infections "Ciffkapseln" should be given as well.

B.G.P.

714—*KUFLIK, W. E., 1937.—"Traitement de l'oxyurase humaine par l'acide embélique." Thèse, Lausanne, 24 pp.

715—*LE DUC, A. C. J. M., 1937.—"Les helminthes de l'éléphant d'Asie." Thèse, Alfort.

716—PANDAZIS, G., 1937.—"Les helminthes parasites de l'homme, en Grèce." Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 2006-2012.

In Greece the most common helminths found in man are *Taenia saginata*, *Echinococcus granulosus*, *Hymenolepis nana*, *Ascaris lumbricoides*, *Enterobius vermicularis* and *Trichuris trichiura*. Infection rates were found to be lower in Athens than in other towns, or in rural areas. Pandazis records from Corfu the first autochthonous infection with *Ancylostoma duodenale* in Greece.

A.E.F.

717—ROBERTSON, D., 1937.—"The parasitic helminths of sheep in Scotland." Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 2013-2043.

Robertson gives the results of a survey of the helminth parasites of lambs in Scotland and includes a list of the species found, the degree of infestation and the frequency of occurrence in the host. The high incidence of *Ostertagia* spp. and to a less extent of *Nematodirus* and *Trichostrongylus* spp. are noteworthy features of the survey. The author considers that *Chabertia ovina* and *Trichuris ovis* can no longer be regarded as of no pathogenic importance in Scotland.

D.O.M.

718—RODHAIN, J., 1937.—"Les localisations tissulaires de *Microfilaria volvulus* (Leuckart)." Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 513-516.

The embryos of all species of *Onchocerca* appear to have a special affinity for the connective tissues of their hosts. Rodhain believes that they undergo some maturation, during their stay in the lymph spaces of the skin, which is a preparation for their further evolution in their invertebrate intermediary.

R.T.L.

719—SANT'ANNA, J. F., 1937.—"Quelques considérations sur le parasitisme chez les vers." Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 2045-2056.

Sant'Anna discusses the various ways in which helminths have developed from free-living to parasitic forms, giving as examples *Strongyloides stercoralis*,

* Original not available for checking or abstracting.

Dracunculus medinensis and other species, showing how the life-history indicates a simple parasitic adaptation (e.g., *Oxyuris*, *Trichuris*) or a more advanced adaptation (e.g., *Ascaris*).
A.E.F.

- 720—SCHINDLER, R., 1937.—“Das Blutbild des Hundes bei Trichocephalus-infektion.” Inaugural-Dissertation, Leipzig, 46 pp.

Schindler has examined the blood picture of 10 dogs infected with *Trichurus vulpis*. Only two showed signs of anaemia. General features of the blood picture were: eosinophilia, displacement to the left of Arneth's index, reduction in polymorphonuclears and monocytes, and appearance of lymphoblasts. The leucocyte plasma was slow in staining. The significance of these features is discussed.
B.G.P.

- 721—*SCHMEHLE, H., 1937.—“Zur Differentialdiagnose der parasitären und nichtparasitären Bestandteile im Kot von Pferd, Rind und Schaf.” Inaugural-Dissertation, Giessen.

- 722—SCHUURMANS STEKHOFEN, jr., J. H., 1937.—“Nematodes.” Bronns Klassen und Ordnungen des Tierreichs, Leipzig. Bd. 4, Abt. 2, Buch 3, Lfg 5, pp. 365-498.

- 723—SENEVET, G., 1937.—“Les sparganoses.” In: Encyclopédie Médico-Chirurgicale, Paris. [Reprint 4 pp.]

- 724—SOUTHWELL, T. & KIRSHNER, A., 1937.—“A guide to veterinary parasitology for veterinary students and practitioners.” London, x + 143 pp.

This guide to veterinary parasitology deals only with protozoa and helminths. The parasitic arthropods are not mentioned. Of 143 pages 26 are devoted to protozoa, 26 to cestodes, 11 to trematodes and 31 to nematodes. The microscope, the examination of blood and of faeces, and the preservation of helminths are briefly considered. The parasites of meat and fish which are likely to be encountered in food inspection are reviewed in a separate chapter. A host-parasite list covers those species mentioned in the text. At the end of the volume there are 2 pages of drawings of the commoner helminth eggs and 12 pages of diagrams illustrating the essential stages in the life-cycle of the more important worms. The book is designed to meet the needs of veterinary students and succeeds in giving in 143 pages the chief facts regarding the commoner parasitic infestations and their significance in relation to pathology and prevention. There are 88 text figures, many of which are refreshingly new.
R.T.L.

- 725—STEFANŃSKI, W., 1937.—“Sur les nématodes libres des lacs du Tatra.” Comptes Rendus du XIIIe Congrès International de Zoologie, Lisbonne, 1935, 2, 1068-1082.

Stefański has made a survey of the free-living nematodes of the lakes of Tatra (Poland). Forty-six species are recorded, including *Ironus intermedius* n. sp., which is briefly described and differentiated.
A.E.F.

* Original not available for checking or abstracting.

726—STEFANŃSKI, W. & STRANKOWSKI, M., 1937.—“ Sur un cas de pénétration du strongle géant dans le rein droit du chien.” *Comptes Rendus du XIIe Congrès International de Zoologie, Lisbonne, 1935, 3, 2001-2005.*

727—STOLL, N. R., 1937.—“ Tapeworm studies VI. Beginning of reproductive maturity of *Moniezia expansa* in sheep.” *Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 611-619.*

The usual beginning of reproductive activity in *Moniezia expansa* occurs 35 to 38 days after exposure to natural infection. R.T.L.

728—*SUSONI, A. H., 1937.—“ Contribution à l'étude de la distomatose par *Fasciola hepatica*.” *Thèse, Paris.*

729—WARDLE, R. A., 1937.—“ The physiology of tapeworms.” In: “ *Manitoba Essays, 60th Anniversary Commemoration Volume, University of Manitoba.*” pp. 338-364.

Wardle gives a critical review of the literature on the physiology of tapeworms and discusses some of the problems which await further research. R.H.H.

730—WILKENING, H., 1937.—“ Hautreaktionen mit Trichinen- und Ascarisantigen bei gesunden und mit *Ascaris lumbricoides* befallenen Schlachtschweinen.” *Dissertation, Hannover, 44 pp.*

Wilkening has tried to adapt the intracutaneous and scarification tests for the identification of *Ascaris* and *Trichinella* infections in pigs. He unfortunately obtained positive results from non-infected animals, which makes the tests unreliable. In the case of *Ascaris* infection, it is probable that the skin remains sensitive for a long time after the infection has been lost. P.A.C.

731—ZONTSCHIEW, W. T., 1937.—“ Zur Frage der Spezifität der ‘Casoni-Botteri’-Reaktion.” *Festschrift Bernhard Nocht zum 80. Geburtstag, Hamburg, pp. 695-698.*

732—†PAPERS ON HELMINTHOLOGY published in commemoration of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937, xxii+796 pp.

- a. ABULADZE, K. I., 1937.—“ A new nematode parasite of the horse *Caballonema longicapsulatum* (Trichonematinae) nov. gen., nov. sp.” pp. 1-4. [In Russian.]

(732a) A new genus of Trichonematinae named *Caballonema longicapsulatum* n. g., n. sp. is described from the large intestine of the horse in Azerbaidjan. The buccal capsule and bursa are illustrated. R.T.L.

* Original not available for checking or abstracting.

† Detailed translations of the Russian summaries of most of these papers are filed in the Imperial Bureau of Agricultural Parasitology (Helminthology).

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- b. ACKERT, J. E., 1937.—“On the nutrition of the nematode *Ascaridia lineata* (Schneider).” pp. 5-8.
- c. AFRICA, C. M. & GARCIA, E. Y., 1937.—“*Plagiorchis* sp. a new trematode parasite of the human intestine.” pp. 9-10.
- d. ALICATA, J. E., 1937.—“Larval development of the spirurid nematode, *Physaloptera turgida*, in the cockroach, *Blattella germanica*.” pp. 11-14.
- e. ALVEY, C. H. & STUNKARD, H. W., 1937.—“Observations on trematodes of the genus *Clinostomum*.” pp. 15-22.
- f. ANTIPIN, D. N., 1937.—“A comparison of the anthelmintic efficacy of tetrachlorethylene and the ‘Sprehn-capsules’ against ascariidosis and uncinariidosis of silver foxes.” pp. 23-28. [In Russian : English summary pp. 27-28.]

(732b) In an attempt to ascertain if *Ascaridia lineata* is a tissue or lymph feeder in the duodenum of chickens, Ackert transferred worms of 3 or more weeks old into the body cavity of chickens. Only 16 out of 142 live *A. lineata*, so transplanted, remained alive for from 1 to 4 days. They were unable to thrive outside the gut. The occasional presence of these worms in hen's eggs is thought to be due to migration from the large intestine via the cloaca and oviduct.

R.T.L.

(732c) Five specimens of a species of *Plagiorchis* were found at post-mortem in Manila, in a Filipino. Owing to the chaotic state of the genus the species is not diagnosed. This appears to be the first recorded infestation of man by a member of the Lepodermatidae.

R.T.L.

(732d) Eggs of *Physaloptera turgida* from the opossum *Didelphis virginiana* were fed to *Blattella germanica*, and first and second stage larvae were recovered after 14 days. Third stage larvae encysted and sexually differentiated were recovered after 27 days. Attempts to produce adults by infecting dog, cat, rabbit, guinea-pig, rat and chick were negative, but living third stage larvae were recovered from the stomach washings of the cat and rabbit. In the rat the larvae had become encapsuled in the stomach wall.

R.T.L.

(732e) Four adult *Clinostomum attenuatum* from *Ardea herodias* are described. Metacercariae of *Clinostomum* from several different species of fish and frogs show much variation in form of body, and in size and relative arrangement of organs. These observations do not confirm the specific diagnoses used by Cort to distinguish *Clinostomum marginatum* and *C. attenuatum*.

R.T.L.

(732f) Tetrachlorethylene is a drug of high efficacy against ascarids and hookworms in silver foxes. Although it may cause intestinal irritation this in practice is without serious consequence. “Sprehn's capsules” are more expensive and their use is therefore said not to be justified as they are less efficient.

R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- g. BAUDET, E. A. R. F., 1937.—“Ueber einige Heilmittel gegen Ascaridiosis bei Tauben.” pp. 29-36.
- h. BELKIN, G. Y., 1937.—“Pathologic anatomy and pathogenesis of dictyocaulosis of the horses.” pp. 37-44. [In Russian.]
- i. BELOZEROVA-SIPLYAKOVA, O. M., 1937.—“The variability in the distribution of vitellariae in the trematode species *Azygia lucii* (Müller, 1776).” pp. 45-46. [In Russian.]
- j. BHALERAO, G. D., 1937.—“Schistosomes and schistosomiasis in India.” pp. 47-54.
- k. BOEV, S. N., 1937.—“The nematodes of the genus *Synthetocaulus* parasitic in sheep of Alma-Ata territory, Kasakhstan.” pp. 55-62. [In Russian.]
- l. BURDELEV, T. E., 1937.—“*Echinoparyphium syrdariense*, a new trematode of the fowl.” pp. 63-65. [In Russian.]
- m. CAMERON, T. W. M., 1937.—“A new species of Heligmosominae from the Labrador Collared-Lemming.” pp. 66-68.

(732g) Administration of anthelmintics to pigeons is difficult, especially when there is food in the crop. They should be treated fasting. Even this will not prevent vomiting. Carbon tetrachloride, tetrachlorethylene, chenopodium oil, kamala with nicotine sulphate, Ascariolin (containing santonin and calomel), Ascaridol, hexylresorcinol, and turpentine were examined as to their efficacy against *Ascaridia columbae*. Chenopodium oil proved the best. Carbon tetrachloride was fairly satisfactory. The remainder were ineffectual against *Ascaridia* in pigeons. R.T.L.

(732h) Belkin has studied the pathological anatomy and pathogenesis of *Dictyocaulus* infection in horses, and records *D. arnfieldi* for the first time in White Russia. A heavy infection can cause exhaustion, anaemia and death, or lead to a subsequently fatal broncho-pneumonia. Sexually mature worms can be found not only in the bronchial tubes but also in their walls and in the pulmonary parenchyma. There is no local eosinophilia. R.T.L.

(732i) Bhalariao gives a resumé of the work done up to the present on schistosomes and schistosomiasis in India. A bibliography containing 53 references is appended. R.T.L.

(732k) Boev deals with *Synthetocaulus* infection in the lungs of sheep in the Alma-Ata area of Kazakstan in Central Asia. He notes the presence not only of *S. hobmaieri*, *S. raillieti* and *Dictyocaulus filaria* but names a new species, *Synthetocaulus skrjabini*, of which a satisfactory description could not be given owing to scanty material. R.T.L.

(732l) Burdelev describes and illustrates *Echinoparyphium syrdariense* n. sp. from the domestic fowl in Uzbekistan (Tashkent). R.T.L.

(732m) Cameron describes *Heligomosomum hudsoni* n. sp. from the large intestine of the Labrador Collared-Lemming, *Dicrostonyx hudsonius*. It differs from known species in the absence of prebursal papillae and in the smaller size of the latero-ventral rays of the bursa. It somewhat closely resembles *H. costellum* (Duj., 1845). R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- n. CHITWOOD, B. G., 1937.—“A revised classification of the Nematoda.” pp. 69-80.
- o. CORT, W. W. & OTTO, G. F., 1937.—“*Trichuris trichiura* in the United States.” pp. 81-88.
- p. CRAM, E. B., 1937.—“A review of the genus *Oxyspirura*, with a morphological study of *O. petrowi* Skrjabin, 1929, recently discovered in galliform birds of the Northern United States.” pp. 89-98.
- q. CUVILLIER, E., 1937.—“Observations on the biological and morphological relationships of *Dispharynx spiralis* in bird hosts.” pp. 99-104.

(732n) A classification of the Nematoda is outlined in which variations of the cephalic papillae, stoma, oesophagus, somatic musculature and the reproductive and excretory systems are used to determine relationships. There are two subclasses, Phasmodia and Aphasmodia. Most parasitic nematodes probably arose from saprophytic soil forms. Only the Phasmodia classification is dealt with in detail in the present communication.

Subclass : Phasmodia.

Order : Rhabditida. Suborders : Rhabditina, Strongylina, Ascaridina.

Order : Spirurida. Suborders : Spirurina, Camallanina.

Subclass : Aphasmodia.

Order : Chromadorida. Suborders : Chromadorina, Monhysterina.

Order : Enoplida. Suborders : Enoplina, Dorylaimina, Diotophymina.

The paper gives diagnoses for the various groups, and lists the families and subfamilies of each. Within the Phasmodia there appear to be 3 major lines of parasitic development, represented by the Strongylina, Ascaridina and Spirurida. In the Aphasmodia there are only two major lines of parasitic development, represented by Trichuroidea-Mermithoidea and Diotophymina. [In the addenda, p. 795, a note is added changing the suffix of all the suborders from ‘-ata’ to ‘-ina.’ These changes have been incorporated in this abstract.]

R.T.L.

(732o) *Trichuris trichiura* in the United States is almost entirely limited to the more isolated parts of the mountains and foothills of the south eastern Appalachian Range, to more limited areas in south-central Louisiana, and to the City of Tampa, Florida. It also occurs in a few insanitary State Institutions.

R.T.L.

(732p) The eye-worm of chickens, *Oxyspirura mansoni*, is localized to the south-eastern parts of the North American continent. *Oxyspirura petrowi* has recently come to light in galliform birds in the northern part of the United States. Cram redescribes this species and draws attention to considerable variations in different hosts. A key is provided for the 20 species of *Oxyspirura* which occur in birds.

R.T.L.

(732q) Although morphologically identical, *Dispharynx spiralis* of wild and game birds cannot without great difficulty be transmitted experimentally to chickens or turkeys. Cuvillier regards this as indicating the occurrence of a separate physiological strain in the wild birds. On the other hand *D. spiralis* from the ruffed grouse is easily transferred to pigeons.

R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- r. DAVTYAN, E. A., 1937.—“A study of the life-cycle of *Synthetocaulus kochi* Schulz, Orloff and Kutass, 1933, the lungworm of sheep and goat.” pp. 105-122. [In Russian.]
- s. DEMIDOVA, A. Y., 1937.—“The helminthofauna of dogs in Azerbaidjan.” pp. 123-125. [In Russian.]
- t. DIKMANS, G., 1937.—“*Protostrongylus rushi*, a new lungworm from the mountain sheep, *Ovis canadensis*.” pp. 126-128.
- u. DINNIK, N. N., 1937.—“On the sexual process in the eggs of *Trichocephalus trichiurus* after their elimination from the intestine of the host.” pp. 129-131. [In Russian.]
- v. DINNIK, Y. A. & DINNIK, N. N., 1937.—“The structure of the shell and resistance of the eggs of *Trichocephalus trichiurus*.” pp. 132-138. [In Russian.]

(732r) A detailed account is given of *Synthetocaulus* in sheep and goats in Armenia. This infection ranges from 9% to 92% in the Armenian Soviet Republic as compared with *Dictyocaulus* 9% to 47%. *Synthetocaulus* larvae can survive outside the body for four months and are capable of migrating vertically and horizontally. They also are resistant to high temperatures, 30° to 60°C. kills them only after 30 minutes exposure. They also resist desiccation. These data differ from those given by the Hobmaiers. Direct sunlight kills the larvae within a few hours. Their resistance to various chemicals is noted. Davtjan succeeded in experimentally infecting *Limax* sp. and other slugs to the infective stage. Full development of *Synthetocaulus kochi* (= ? *S. rufescens*) takes 35 to 60 days. [In an addendum (p. 795) the author states that concomitant infection with *Muellerius capillaris* had been overlooked.]

R.T.L.

(732s) From dogs in the Azerbaidjan Soviet Republic there are 16 species of helminths. The commonest are *Toxascaris leonina*, *Dipylidium lanceatum*, *Ancylostoma caninum* and *Spirocerca lupi*. Rarely found are *Diocotophyme renale*, *Dicrocoelium lanceatum*, *Euparyphium melis* and *Hymenolepis diminuta*. *Echinococcus granulosus* is but moderately distributed but when infections occur they may total over five thousand in a single dog. R.T.L.

(732t) A lungworm from *Ovis canadensis* is described under the name *Protostrongylus rushi* n. sp. It differs from *P. rufescens* and *P. stilesi* in the absence of teeth on the distal portions of the paired accessory pieces; from *P. ocreatus* by the shape of the terminations of these distal portions; from *P. macrotis* by the presence of an unpaired accessory piece; from *P. austriacus* by the length of the spicules and from *P. rupicaprae* by absence of a provagina. From all species of *Protostrongylus* it differs in the length of the vagina.

R.T.L.

(732u) Dinnik deals with the nuclear changes in the early development of the ovum of *Trichuris trichiura*.

R.T.L.

(732v) The shell of the egg of *Trichuris trichiura* consists of four envelopes, and can resist the action of watery solutions of copper sulphate, hydrochloric and nitric acids, of mercuric chloride, and of formalin. They also resist desiccation. The polar plugs readily emit and absorb water. Development at 30° C. is slow; a motile larva is formed by the 21st day.

R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- w. DUBROVIN, E. A. & PETROV, M. I., 1937.—“The influence of the ultrashort waves on the development and viability of the eggs of [the] helminths *Toxocara mystax* and *Toxascaris leonina*.” pp. 139-148. [In Russian.]
- x. EFIMOV, A. Z., 1937.—“A new trematode *Philophthalmus skrjabini* parasitic in *Larus ridibundus*.” pp. 149-154. [In Russian.]
- y. ERSHOV, V. S., 1937.—“The control of strongyloidosis of cattle, sheep, pig and horse.” pp. 155-159. [In Russian.]
- z. FAUST, E. C., 1937.—“The life cycle of *Strongyloides*.” pp. 160-166.
- ba. FEDYUSHIN, A. V., 1937.—“Helminthofauna of geese and ducks in Western Siberia in connection with the problem of natural reservoirs for the purpose of bird breeding.” pp. 167-177. [In Russian.]
- bb. GAIBOV, A. D., 1937.—“Parasitic worms of the horses of Azerbaidjan.” pp. 178-179. [In Russian.]

(732w) Dubrovin & Petrov have studied the influence of ultra-short rays on the vitality and development of the ova of *Toxocara mystax* and *Toxascaris leonina*. A high frequency field induced a retardation of development. Complete retardation occurred in some of the eggs. This retardation did not show itself immediately after irradiation: it also varied with the species used and the different wave lengths. R.T.L.

(732x) A new trematode named *Philophthalmus skrjabini* n. sp. is described and illustrated from *Larus ridibundus*. A table is added for the differentiation of the 6 known species of this genus; from this *P. anatinus* and *P. rizalensis* are excluded. R.T.L.

(732y) Ershov deals with the campaign against strongyloidiasis in calves, lambs, piglets and foals. The infection is chiefly important in young animals up to one year old, and takes place in enclosed premises. Therapeutic measures have not proved effective nor are the usual prophylactic measures employed against other types of helminthiasis adequate. R.T.L.

(732z) Faust summarizes the important new data recently acquired concerning the life-history of *Strongyloides stercoralis*. In his view the indirect type of development is the fundamental one. The direct type has developed through unfavourable environmental conditions and the hyper-infective type is an adaptation to a purely parasitic life within the host and is a modification of the direct type. Faust is convinced that it results when unfed rhabditiform larvae rapidly metamorphose into dwarf filariform larvae. R.T.L.

(732ba) Fedyushin reports on the helminth fauna of geese and ducks in Western Siberia. *Amidostomum boschadis* n. sp. is recorded from *Anas platyrhynchos*. R.T.L.

(732bb) Gaibov lists 27 species of helminths in horses in Azerbaidjan, including 14 species of *Trichonema*. *Dicrocoelium lanceatum* and *Anoplocephala perfoliata* are the only flatworms mentioned. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- bc. GILBERT, L. I., 1937.—“A new nematode, *Libyostrongylus magnus* n. sp. parasitic in an African ostrich.” pp. 180-182. [In Russian.]
- bd. GNEDINA, M. P., 1937.—“Methods of isolating of eggs and larvae of helminths from the grass of the pastures.” pp. 183-188. [In Russian.]
- be. GOODEY, T., 1937.—“Some remarks on suitable terms to describe nematodes or other animals which feed on decomposing organic matter.” pp. 189-190.
- bf. GORSHKOV, I. P., 1937.—“A study of helminthofauna of domestic geese of Omsk and Chelyabinsk regions.” pp. 191-202. [In Russian.]
- bg. GORSHUNOVA, O. K., 1937.—“A comparison of methods for the detection of eggs of swine metastrongyles.” pp. 203-206. [In Russian.]
- bh. GRAHAM, G. L., 1937.—“A comparison of the lung lesions produced in laboratory animals by *Ascaris lumbricoides* of swine.” pp. 207-214.
- bi. GUSHANSKAYA, L. K., 1937.—“The nematode fauna of *Coracias garrula* in the USSR.” pp. 215-220. [In Russian.]
- bj. ZHUKOVA, E. V., 1937.—“On the genus *Orchipedium* (Brn., 1901).” pp. 221-225. [In Russian.]

(732bc) *Libyostrongylus magnus* n. sp. is described by Gilbert from the glandular stomach of the ostrich, *Struthio camelus*. R.T.L.

(732bd) Gnedina reviews methods of investigating ova and larvae of helminths on grass. He finds that the Baermann method is the most efficient for larvae. Those of Fülleborn and Lein are ineffective. Cort's formalin method was very effective in differentiating larvae of free-living and parasitic species. R.T.L.

(732be) As there are grounds for objection to the application of the words “saprophyte” and “saprophytic” to animals which feed on decomposing organic matter, Goodey suggests the use of “saprophage” and “saprophagous”. R.T.L.

(732bf) Gorshkov lists the helminth fauna of domestic geese in the Omsk and Chelyabinsk regions. R.T.L.

(732bg) Gorshunova has made a comparative evaluation of coprological methods for diagnosis of metastrongylosis in swine. Darling's method as adapted by Scherborich is very effective. R.T.L.

(732bh) By administering a known number of infective eggs of *Ascaris lumbricoides* from pigs, Graham has found that the lung lesions in rats are less severe than those in guinea-pigs. Mice are slightly more susceptible than rats. Rabbits are as susceptible as guinea-pigs. The dog, opossum and cat failed to show lung lesions after feeding with large numbers of infective eggs. The question is raised as to the actual occurrence of lung migration in human beings of aberrant *Ascaris* larvae. R.T.L.

(732bi) The dove-coloured crow, *Coracias garrula*, in the Azov-Black Sea region harbours 6 species of helminths. Of these the commonest is a new Acuariidae, *Stellobronema acuariana* n. g., n. sp. R.T.L.

(732bj) The characters of the species of the trematode genus *Orchipedium* and a full description of *O. formosum*, are given by Zhukova. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- bk. HALL, M. C., 1937.—“The international control of parasites.” pp. 226-230.
- bl. HOBMAIER, A., 1937.—“Auxiliary hosts in life cycle of lungworm in cat *Aelurostrongylus abstrusus*.” pp. 231-233.
- bm. HOBMAIER, M., 1937.—“Studies on the pathology of *Elaphostrongylus odocoilei* in *Odocoileus columbianus columbianus*.” pp. 235-240.
- bn. HUNTER, III, G. W., 1937.—“A new approach to helminthological morphology.” pp. 241-244.
- bo. IVANITSKI, S. V. & KRASNOV, Y. G., 1937.—“A study of the anthelmintic efficacy of oil of terebentine and carbon bisulphide used against ascarides and strongylids of horses.” pp. 245-252. [In Russian.]
- bp. IVANOV, A. S. & MURIGIN, I. I., 1937.—“To the knowledge of the helminthofauna of fishes of the Volga-river.” pp. 253-268. [In Russian.]

(732bk) Hall, examining some of the possibilities in the international control of parasites, says “the mesh of quarantine that will let trade through and keep parasites out must be very finely adjusted” R.T.L.

(732bl) *Aelurostrongylus abstrusus* larvae develop to the infective third stage in certain molluscs. Hobmaier now shows that infective stages found in mice result from feeding mice and white rats with infected molluscs. The larvae are subsequently found throughout the intestinal tract embedded in the submucosa, subserosa, in the neighbouring mesentery, in the pleural cavity, in the body cavity, and in the serous coverings of the pericardium, lungs, diaphragm and especially in the fatty connective tissues of ligaments. In birds, water-frogs, toads, lizards and snakes, encysted larvae could also be found after experimental infestation. In all instances adult stages of the lungworm were obtained later by feeding these cystic stages to cats. This intercalation of auxiliary hosts in the life-history of a parasite is a new and unexpected bypath in lungworm biology. R.T.L.

(732bm) Hobmaier has studied the histology of the lungs of the black-tailed deer *Odocoileus columbianus columbianus* infected by *Elaphostrongylus odocoilei*. The pathological changes are similar to those observed in the lungs of carnivores infected with *Angiostrongylus* but have not been reported previously in ruminants. R.T.L.

(732bn) Fewer new species would be described or stand the test of time if studied from the viewpoints of life cycle, morphology, ecology and statistics. R.T.L.

(732bo) The efficiency of turpentine and grey carbon as anthelmintics for ascaridosis and strongyloidosis in horses has been estimated by Ivanitski & Krasnov. At intervals of 2 or 3 weeks administration of grey carbon hourly and turpentine in gelatine capsules appears to be as highly efficient as carbon tetrachloride followed by a purge. R.T.L.

(732bp) Ivanov & Murigin provide materials for a helminth fauna of the fish of the Lower Volga. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- bq. JOYEUX, C. & BAER, J. G., 1937.—“Remarques morphologiques et biologiques sur quelques cestodes de la famille des Taeniidae Ludwig.” pp. 269-274.
- br. KAROKHIN, V. I., 1937.—“*Contracaecum milviensis*—a new nematode from *Milvus lineatus* Gray.” pp. 275-280. [In Russian.]
- bs. KATSURADA, F., 1937.—“Beitraege zur Kenntnis der Biologie und der pathogenen Bedeutung der Trematoden.” pp. 281-286.
- bt. KEVORKOV, N. & SIRKINA, S., 1937.—“A case of detection of the liverfluke (*Fasciola gigantica*) in the liver of a man in Uzbekistan.” pp. 287-288. [In Russian.]
- bu. KHALIL, M. & AZIM, M. A., 1937.—“On *Loutfia loutfia* gen. nov. n.sp. of the new family Cleistogamidae, endoparasites of Holothuria from the Red Sea, Egypt.” pp. 289-291.
- bv. KOLMAKOV, D. V., 1937.—“Parasitic worms of *Vulpes lagopus* of the Obdorsky territory.” pp. 292-295. [In Russian.]

(732bq) *Taenia taeniaeformis* Batsch and *T. laticollis* Rud. are, like many adult taenias, difficult to differentiate. There is in the former however a vaginal sphincter which is absent in the latter species. Also the hooks of *T. taeniaeformis* are longer and the eggs are slightly larger. *T. laticollis* has been identified by Joyeux & Baer in *Viverra genetia* in France. A resumé is given of the various types of larvae represented among the Taeniidae. R.T.L.

(732br) A new ascarid, *Contracaecum milviensis* n. sp., in *Milvus lineatus* is described and illustrated by Karokhin. R.T.L.

(732bs) Some trematodes parasitize their normal definitive host for long periods with pathogenic results, and cause more or less severe lesions. Others can parasitize hosts which are not really their definitive hosts. These usually develop incompletely, often with only a few eggs. They do not remain long in the host, but may often cause pathological changes. Man was experimentally infected with stamnosomes and one natural infection was observed. R.T.L.

(732bt) A case of *Fasciola gigantica* is reported from the liver of man in Uzbekistan in Central Asia. R.T.L.

(732bu) A description is given of a platyhelminth found in the intestinal tract of Holothuria from the Red Sea. It is named *Loutfia loutfia* n. g., n. sp. and placed with Faust's *Cleistogamia holothuriana* in a new family Cleistogamiidae. A note in the addenda (p. 796) states that the worms have since proved to be rhabdocoelous turbellarians belonging to the family Anoplodiidae, that *Loutfia* is synonymous with *Cleistogamia* and that the latter genus is close to *Anoplodium*. [See Helm. Abs., Vol. VII, No. 107g.] R.T.L.

(732bv) Kolmakov reports on the helminths found in 10 polar foxes, *Vulpes lagopus*, from the Obdor region (Yamal Peninsula). A full description of *Taenia hyperborea* Linstow, 1905 is given. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- bw. KOPIRIN, A. V., 1937.—“ Helminthofauna of Mongolian sheep and goats.” pp. 296-301. [In Russian.]
- bx. KULIKOV, N. S. & TAMARIN, I. B., 1937.—“ A study of treatment of the dictyocaulosis of horses.” pp. 302-304. [In Russian.]
- by. KRASTIN, N. I., 1937.—“ *Schulzinema miroljubovi* n. g., n. sp. (Nematoda) from *Pseudaxis hortulorum*.” pp. 305-309. [In Russian.]
- bz. FENG, L. C., 1937.—“ Studies on the development of microfilariae.” pp. 310-318.
- ca. LENT, H. & FREITAS, J. F. TEIXEIRA DE, 1937.—“ Sur une nouvelle espèce du genre *Viannia* Travassos, 1914.” pp. 319-321.
- cb. FREITAS, J. F. TEIXEIRA DE & LENT, H., 1937.—“ Sur deux genres de Heligmosominae (Nematoda—Strongyloidea).” pp. 322-327.
- cc. LINTON, E., 1937.—“ On the distribution of the encysted stage of certain cestodes.” pp. 328-332.
- cd. LOSEV, L. A., EROKHIN, I. P. & NIKANOROV, A. F., 1937.—“ Para-filariosis of horses in the territories of the lower Volga.” pp. 333-345. [In Russian.]

(732bw) Kopirin deals with the parasitic worms of sheep and goats in the Soviet of Mongolia. He draws attention to the absence of haemonchosis, fascioliasis and dicrocoeliasis. R.T.L.

(732bx) Kulikov & Tamarin report on experiments in the cure of dictyocaulosis in horses. Intratracheal injections of iodine and potassium iodide watery solutions cause complete expulsion. The horse must be on its back with a slight inclination to one side for the first half of the injection and turned over for the second. The effective dose is 250 to 300 c.c. of 0.1% solution of iodine and 0.2% potassium iodide. R.T.L.

(732by) Krastin describes *Schulzinema miroljubovi* n. g., n. sp. from the spotted deer, *Pseudaxis hortulorum*, and gives a differential table of the 4 other genera of the Oesophagostominae, viz., *Paroesophagostomum*, *Oesophagostomum*, *Chabertia* and *Ternidens*. R.T.L.

(732bz) Feng has studied the details of the morphological changes in *Microfilaria malayi* during its development in *Anopheles hyrcanus* var. *sinensis*. These are represented also in diagrammatic form. R.T.L.

(732ca) Lent and Teixeira de Freitas describe and illustrate the spicules of 6 species of *Viannia* including *V. skrjabini* n. sp. from *Metachirops opossum* in Brazil. R.T.L.

(732cb) [This paper appears also in Ann. Acad. Brasil. Sci., 9 (1), 41-47. For abstract see above No. 417a.]

(732cc) In selachians the adult stages of cestodes are often limited to single or few specific hosts. The disappearance of a single definitive host species might result in the extinction of a parasitic species, whereas it is quite otherwise with the encysted stages. R.T.L.

(732cd) With para-filariosis in horses in the Saratov area there are associated small subcutaneous haemorrhages, containing microfilariae, which are most prevalent in the summer. Developmental stages attributable to this filaria occur in small flies of the Steppes. Various local and palliative measures for treatment are suggested. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- ce. LYUBIMOVA, A. P., 1937.—“An attempt of treating the crenosomatosis of silver foxes.” pp. 346-347. [In Russian.]
- cf. LYUBIMOV, M. P., 1937.—“*Pharyngosetaria marcinowskyi* (Skrjabin, 1923) n. gen., a nematode parasitic in the gall-bladder of *Ardea cinerea*.” pp. 348-351. [In Russian.]
- cg. LYUBCHENKO, S. D., 1937.—“An attempt of control of hookworm diseases in Abkhazia.” pp. 352-358. [In Russian.]
- ch. LYAIMAN, E. M., 1937.—“A study of helminthofauna of *Onchorhynchus gorbuscha* of the Amur-river.” pp. 359-362. [In Russian.]
- ci. MACY, R. W., 1937.—“Two new species of *Paralecithodendrium* (Trematoda) from bats.” pp. 363-365.
- cj. MAGATH, T. B., 1937.—“Factors influencing the geographic distribution of *Diphyllbothrium latum*.” pp. 366-380.
- ck. MANTER, H. W., 1937.—“The status of the trematode genus *Deradena* Linton with a description of six species of *Haploplanchnus* Looss (Trematoda).” pp. 381-387.
- cl. MALIGIN, S. A., 1937.—“Anatomy and morphology of the Strongyloides-species of domestic animals.” pp. 388-395. [In Russian.]

(732ce) Intratracheal injections of solutions of iodine have been used by Lyubimova for cases of Crenosoma in silver-black foxes. R.T.L.

(732cf) Lyubimov creates the new genus *Pharyngosetaria* for *Filaria marcinowskyi* Skrjabin, 1923, a parasite of the grey heron, *Ardea cinerea*. The worm is redescribed and illustrated. R.T.L.

(732cg) Lyubchenko gives an account of the organisation of the campaign against ankylostomiasis in the Tkvarcheli mine in Abkhazia (Transcaucasia). R.T.L.

(732ch) Lyaiman records the helminths found in the hump-backed salmon of the river Amur. R.T.L.

(732ci) *Prosthodendrium* (*Paralecithodendrium*) *nokomis* n. sp. from the intestines of the bats *Eptesicus fuscus* and *Nycteris borealis* and *P. (P.) lucifugi* n. sp. from the intestine of *Myotis lucifugus* are described. Both were collected in Minnesota, U.S.A. A key is given of the 6 species now recognized in the subgenus. R.T.L.

(732cj) After reviewing our knowledge of its first and second intermediate hosts and the geographical distribution of the adult *Diphyllbothrium latum*, Magath considers the questions of its introduction and spread in North America, and tabulates the North American lakes known to harbour infected fishes. The paper concludes with a series of suggestions for the control of the infection in North America. R.T.L.

(732ck) *Deradena ovalis* is a synonym of *Haplodena varia*. *D. acuta* and *D. obtusa* are transferred to *Haploplanchnus*. Four new species from fishes at Tortugas, Florida are added to *Haploplanchnus*, viz., *H. sparismoe* n. sp., *H. brachyurus* n. sp., *H. pomacentri* n. sp., and *H. adacutus* n. sp. R.T.L.

(732cl) An account is given of the morphology of species of *Strongyloides* in domesticated animals, viz., *S. westeri*, *S. papillosus* and *S. suis*. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- cm. MIRETSKI, O. Y., 1937.—“A method for calculating the eggs contained in the body of helminths.” pp. 396-397. [In Russian.]
- cn. MOZGOVOI, A. A., 1937.—“Sparrows as agents distributing helminthic infections among domestic animals.” pp. 398-402. [In Russian.]
- co. MÖNNIG, H. O., 1937.—“Helminth toxins.” pp. 403-407.
- cp. MOSKALEV, B., 1937.—“Helminths of horses found in the Voronezh region.” pp. 408-411. [In Russian.]
- cq. MURASHKINTSEV, N. S. & MALEVICH, I. I., 1937.—“A study of the biology of *Moniezia expansa*.” pp. 418-426. [In Russian.]
- cr. NOSIK, A. F., 1937.—“On the resistance of larval echinococci against some physical and chemical agents.” pp. 427-428. [In Russian.]
- cs. OLDHAM, J. N., 1937.—“Further observations on the occurrence and bionomics of *Rhabditis coarctata* Leuck., 1891.” pp. 429-432.
- ct. ORLOV, I. V., 1937.—“Methods of vital differential diagnosis of infestation of ruminants by Strongylata.” pp. 433-439. [In Russian.]

(732cm) The number of ova in parasitic worms may be calculated if the genital tubes are put into a given volume of a 10% solution of caustic alkali, which dissolves the tissues and liberates the ova. R.T.L.

(732cn) The sparrow can act as a mechanical disperser of helminth ova. The eggs and larvae of certain species can also pass through the gut without injury. R.T.L.

(732co) Mönnig gives reasons for believing that helminths do not produce toxic substances apart from their normal and necessary secretions, and that their excretions are not of much importance in this connection. The greatest degree of apparent toxicity of helminths is found where there is external digestion and where a large proportion of the digestive enzyme is lost by the parasite and absorbed by the host. R.T.L.

(732cp) Moskalev gives the incidence of helminth infections in horses slaughtered in Voronezh. R.T.L.

(732cq) From a study of the biology of *Moniezia expansa*, Murashkintsev & Malevich believe that an intermediate host is probably necessary. Infection was picked up from pastures from which sheep had been excluded for three years. R.T.L.

(732cr) Nosik reports the low resistance of hydatid scolices to various chemical and physical factors, e.g., salting, desiccation, heat, cold. R.T.L.

(732cs) By using an ingeniously improvised apparatus conclusive proof is given that encystment in *Rhabditis coarctata* occurs under the stimulus of motion, thus providing an explanation for the fact that encysted forms occur in nature on living arthropods only. R.T.L.

(732ct) Orlov finds it impracticable to differentiate the first stage larvae of intestinal nematodes of ruminants. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- cu. ORLOV, N. P. et al., 1937.—“Observations on the biology of *Dictyocaulus filaria*.” pp. 440-448. [In Russian.]
- cv. OZAKI, Y., 1937.—“Two new genera of the trematode family Allocreadiidae.” pp. 449-453.
- cw. PALIMPSESTOV, M. A., 1937.—“The helminthofauna of domestic animals of Mordovian Autonomous, Kuibyshev and Orenburg districts.” pp. 454-458. [In Russian.]
- cx. PANOVA, L. G., 1937.—“Tapeworms of sheep in Leningrad region.” pp. 459-462. [In Russian.]
- cy. PEREIRA, C., 1937.—“On *Thelandros scleratus* Travassos, 1923.” pp. 463-466.
- cz. PERVAKOV, A. Y., 1937.—“The treatment of dictyocaulosis of sheep.” pp. 467-468. [In Russian.]
- da. PINTO, C. & ALMEIDA, J. LINS DE, 1937.—“Synopsis des helminthes parasites des animaux domestiques du Brésil.” pp. 469-482.
- db. PRICE, E. W., 1937.—“Three new genera and species of trematodes from cold-blooded vertebrates.” pp. 483-490.

(732cu) From observations on the biology of *Dictyocaulus* larvae, Orlov and associates find that larvae hatch from ova in the large intestine, that they are very susceptible to desiccation but resistant to chemicals. On pastures they die quickly and are found chiefly on the rhizomes, and when there is dew. R.T.L.

(732cv) *Leptocreadium* n. g., closely related to *Eurycreadium*, with *L. skrjabini* n. sp. and *L. vitellosum* n. sp., and *Hypocreadium symmetorchis* n. g., n. sp. are described from marine fishes. R.T.L.

(732cw) The incidence of the various helminths of domesticated animals in the Mordov area (near Orenburg) is expressed in percentages. R.T.L.

(732cx) In the Leningrad area, Moniezia infection due to *M. expansa* and *M. benedeni* occurs in from 50% to 73% of the sheep. R.T.L.

(732cy) *Thelandros scleratus* is redescribed, and the marked variations in the male tail due to its contractility are noted as a possible source of confusion of species. R.T.L.

(732cz) In the treatment of dictyocauliasis of sheep, watery glycerine solution of iodine and Lugol's solution both gave satisfactory results, while Trypan blue and Diamond green were valueless. R.T.L.

(732da) A classified list of helminths of the various domesticated animals in Brazil is accompanied by the relevant bibliographical data. R.T.L.

(732db) Price describes *Dermatemytrema trifoliata* (Diplodiscinae) n. g., n. sp. and *Octangioides skrjabini* (Angiodictyidae) n. g., n. sp. from turtles, and *Hexangitrema pomacanthi* (Angiodictyidae) n. g., n. sp. from the black angel fish, *Pomacanthus arcuatus*. The 9 genera of the family Angiodictyidae are differentiated. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- dc. PODYAPOLSKAYA, V. P. & DEDOVA, N. P., 1937.—“The interrelation between the infestation by ascarids and bacterial infections in experimental conditions.” pp. 491-496. [In Russian.]
- dd. POPOVA, Z. G., 1937.—“A new nematode of the cattle *Ostertagia kolchida* n. sp.” pp. 497-499. [In Russian.]
- de. POPOVA, K. A., 1937.—“A new trematode species *Paramphistomum* (*Cauliorchis*) *skrjabini* from the rumen of cattle and buffaloes.” pp. 500-504. [In Russian.]
- df. POPOV, P. P., EFENDIEV, M. E. & TUAEV, S. M., 1937.—“Endemical areas of the hookworm disease in Azerbaidjan and the control of it.” pp. 505-507. [In Russian.]
- dg. PETROV, A. M. & GAGARIN, V. G., 1937.—“Vital differential diagnosis of horse strongylosis, delafondiosis, alfortiosis, triodontophorosis and trichonematosis.” pp. 508-528. [In Russian.]
- dh. POTEKINA, V. A., 1937.—“The diagnosis and treatment of hymenolepidosis (*Hymenolepis lanceolata*) of geese.” pp. 529-541. [In Russian.]
- di. PRENDEL, A. R., 1937.—“The helminthofauna of cats in Odessa.” pp. 542-546. [In Russian.]

(732dc) From a study of the interaction of ascaris invasion and bacterial infection under experimental conditions in which mouse typhoid (bact. Breslau) and *Ascaris lumbricoides* and *A. suis* were used, it is concluded that the migrating helminth larvae induce an earlier and more severe bacterial invasion than in the controls. R.T.L.

(732dd) Popova describes *Ostertagia kolchida* n. sp. from large horned cattle in Georgia (Caucasus) and differentiates it from 8 related species, of which several have synonyms. R.T.L.

(732de) *Cauliorchis skrjabini* n. sp. is a new amphistome in the rumen of large horned cattle and buffaloes. R.T.L.

(732df) The literature of endemic ankylostomiasis in Azerbaidjan S.S.R. and measures for its control by mass therapy with carbon tetrachloride are summarized. R.T.L.

(732dg) Infection of horses with *Strongylus*, *Delafondia*, *Alfortia*, *Triodontophorus* and *Trichonema* species cannot be differentiated by the ova, but diagnosis should be made from larvae obtained by Baermann's technique. A differential table is given. R.T.L.

(732dh) The diagnosis and treatment of hymenolepid infection in geese is discussed. Arecolin with preliminary fasting is recommended out of a large number of chemicals tested. R.T.L.

(732di) The incidence of various helminths in 50 cats in Odessa is recorded. A study of infections of fish in the local markets is urged. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- dj. PUKHOV, V. I., KRIVOSHTA E. E. & VELICHKIN, P. A., 1937.—“On the biology of *Dicrocoelium lanceatum*.” pp. 547-549. [In Russian.]
- dk. PUSHMENKOV, E. P., 1937.—“Trichostrongylids from abomasum of reindeers.” pp. 550-559. [In Russian.]
- dl. RAEVSKAYA, Z. A., 1937.—“Experiments of destroying the eggs of hookworms and ascarids of dogs in the soil.” pp. 560-564. [In Russian.]
- dm. RAEVSKI, V. N., 1937.—“*Renicola paraquinta* n. sp., from *Larus ridibundus*.” pp. 565-568. [In Russian.]
- dn. DE RIVAS, D., 1937.—“*Cysticercus bovis* in man.” pp. 569-570.
- do. RUDAKOV, V. S., 1937.—“*Ostertagia butschnewi* nov. sp. from sheep with a description of some abnormalities and variations in the structure of sexual organs of certain strongylids.” pp. 571-573. [In Russian.]
- dp. RUTKEVICH, N. L., 1937.—“*Diphyllbothrium giljadicum* n. sp. and *Diphyllbothrium luxi* n. sp., two new tapeworms of man from Sakhalin.” pp. 574-580. [In Russian.]

(732dj) In the Azov-Black Sea region the intermediate hosts of *Dicrocoelium dendriticum* are *Theba fruticicola* and *T. carthusiana* var. *minor*. These occur especially in level places with dense vegetation and damp soil. Development takes 82 to 134 days in the intermediate hosts and 70 to 81 days in the definitive hosts. The definitive host can acquire infection by eating the infected intermediate host. R.T.L.

(732dk) The principal trichostrongylids of the northern reindeer are *Ostertagia grühneri*, *O. arctica*, *O. circumcincta*, *O. trifurcata*, while *O. (Grosspiculagia) petrowi* n. sp., *O. (Ostertagia) tatiani* n. sp. and *O. polarica* n. sp. occur in small numbers with 4 other unnamed species. R.T.L.

(732dl) Hookworm eggs in the morula stage and active larvae die in two days in solutions of 4% carbolic acid, 4% sulphuro-carbolic mixture and in 3% mercuric bichloride-carbolic solution. Segmented eggs of *Toxascaris leonina* die in 7 to 8 days in 4% carbolic acid, in 4% sulphuro-carbolic mixture in 10 days, and in 3% mercuric-bichloride carbolic solution in 15 days. Eggs containing developed larvae die in 15 days in 5% solution of carbolic acid heated to 50°C., but the two latter mixtures are of no value for practical application. R.T.L.

(732dm) Raevski describes and figures *Renicola paraquinta* n. sp. from *Larus ridibundus*, and gives a table of comparative measurements of all species in the genus. R.T.L.

(732dn) Several cysticerci with unarmed scolex which occurred in a cadaver in Pennsylvania are illustrated and described. This is the first record of *Cysticercus bovis* in man in America. One previous case has been reported from Europe by Fontan in 1919. R.T.L.

(732do) *Ostertagia butschnewi* n. sp. is described and figured from sheep. R.T.L.

(732dp) Rutkevich lists 35 species of *Diphyllbothrium* and describes, with figures, *D. giljadicum* n. sp. and *D. luxi* n. sp. from man in the island of Sakhalin. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- dq. SANDGROUND, J. H., 1937.—“Three new microcoeliids from African Cheiroptera.” pp. 581-585.
- dr. SHIBAEV, L. P., 1937.—“Muscle-coenurosis of sheep in Uzbekistan.” p. 586. [In Russian.]
- ds. SHIKHOBALOVA, N. P. & POPOVA, N. V., 1937.—“The action of the albuminous and lipoidal substances of broad tapeworm on the blood of experimental animals.” pp. 587-606. [In Russian.]
- dt. SHISHKIN, G. N., 1937.—“On the helminthofauna of sheep in Georgia.” pp. 607-609. [In Russian.]
- du. SHULMAN, E. S. & PARETSKAYA, M. S., 1937.—“Enterobiosis and its connection with the vulvovaginitis of children.” pp. 610-614. [In Russian.]
- dv. SCHULZ, R. E. S. & KAMINSKI, F. O., 1937.—“The metastrongyles of swine, their morphology and systematic position.” pp. 615-624. [In Russian.]
- dw. SHUMAKOVICH, E. E., 1937.—“Experiments on the treatment of trichostrongylidosis of sheep and goat.” pp. 625-636. [In Russian.]
- dx. SCHUURMANS STEKHOVEN, jr., J. H., 1937.—“Interrelation between freeliving and parasitic nematodes.” pp. 637-639.

(732dq) Three new microcoeliids are recorded from bats in the Belgian Congo, viz., *Platynosomum philippinorum congolensis* n. subsp., *Eurytrema epomopsis* n. sp. and *Dictyonograptus pipistrelli* n. sp. R.T.L.

(732dr) From two sheep in the Surkhan-Daria area, Shibaev describes two coenurus cysts, one the size of a hen's egg, the other of a fist. These he considers to be of different types or they may be a new form, not here identified. R.T.L.

(732ds) Injections of the albuminous and fatty substances of *Diphyllbothrium latum* into cats produced only weak reactions. One cat, after a course of 50 c.c. injections of macerated worm for 20 days, developed a marked hypochromic anaemia lacking the characteristics of pernicious anaemia. Cats acquire resistance to infection in endemic regions. R.T.L.

(732dt) To a list of 12 known intestinal nematodes of sheep, Shishkin adds and figures *Ostertagia bakuriani* n. sp. from Baku. R.T.L.

(732du) Enterobiasis is one of the most vital factors in the etiology of vulvovaginitis, especially in childhood. R.T.L.

(732dv) *Metastrongylus elongatus* is the commonest lungworm of pigs in U.S.S.R. territory. *M. salmi* is recorded there for the first time. The genus *Choerostrongylus* is merged in *Metastrongylus*. R.T.L.

(732dw) The most effective treatment so far found for trichostrongylidosis in Mongolian sheep is a mixture of 1% copper sulphate in distilled water and 4% lysol. Its effectiveness is 60%. R.T.L.

(732dx) The views of previous authors on the interrelations of freeliving and parasitic nematodes are critically summarized and the author's own provisional conclusions are added. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- dy. SCHWARTZ, B. & LUCKER, J. T., 1937.—“The course of infection of pigs with lungworms of the genera *Metastrongylus* and *Choerostongylus*.” pp. 640-652.
- dz. SKVORTSOV, A. A., 1937.—“Some observations on the biology of the nematode *Habronema megastoma* (Rud., 1819).” pp. 653-662. [In Russian.]
- ea. SOBOLEV, A. A., 1937.—“Helminthofauna of Blattidae in the USSR.” pp. 663-670. [In Russian.]
- eb. SOKOLOVA-ANDRONOVA, E. V., 1937.—“The renal trematodes of birds of far-east.” pp. 671-672. [In Russian.]
- ec. SPREHN, C., 1937.—“Ein Beitrag zur praktischen Helminthologie im Dienste der Silberfuchszucht.” pp. 673-680.

(732dy) Experimental infections of pig litter-mates with larvae of metastrongyles showed that the output of eggs was much greater in those exposed to massive infections than in those exposed to repeated small doses, where the total amount of infective material given was equal. The terminal effect consists in an encystment of the worm in the lungs in nodules of an alveolar lymphatic hyperplastic type. Ultimately these worms degenerate. R.T.L.

(732dz) The eggs of *Habronema megastoma* are ovoviparous and hatch in manure, water, etc., in 48 hours. The eggs swallowed by the larvae of the domestic fly hatch and the larvae migrate into the malpighian in 3 days and encyst during the pupal stage, to migrate later into the thorax and proboscis of the adult fly. R.T.L.

(732ea) Of *Blatta orientalis* 96% are parasitized by *Hammerschmidtella diesingi* and 57% by *Leidynema appendiculata*. Of *Blattella germanica* 72% contained *Blatticola blattae*. The results were based on dissections of 423 spiders fed upon these cockroaches. R.T.L.

(732eb) Of 15 birds of 5 different species 9 contained kidney trematodes. *Renicola quinta* n. sp. is described from *Pseudaria carbo*. Two immature forms are not diagnosed. R.T.L.

(732ec) One of the most important of silver fox parasites is *Uncinaria stenocephala*. The wild foxes are never infected to a serious degree, whereas in breeding enclosures very heavy infections due to much greater concentration of larvae lead to high mortality. Loamy soil was most unfavourable whilst a pure sandy soil was most suitable for development of larvae. Infective larvae were most concentrated on blades of grass in the early morning while dew persisted and when the sun had warmed the ground, also when the sun shone after warm summer rain. As soon as the grass is dry, larvae retire into the ground. Severe infections with *Toxocara canis* are only found in very young silver foxes as the tougher mucous membranes and tissues of older animals offer too much resistance to the migrating larvae. Infection is picked up by the very young foxes only in the hutches where they are born. Only here are conditions suitable for the development of the egg to the infective stage. Hutches should therefore be kept scrupulously clean, especially for a short time before litters are born. P.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- ed. STEINER, G., 1937.—“Intersexuality in two new parasitic nematodes, *Pseudomermis vanderlindei* n. sp. (Mermithidae) and *Tetanonema strongylurus* n. g., n. sp. (Filariidae).” pp. 681-688.
- ee. STUNKARD, H. W., 1937.—“The life cycle of *Himasthla quissetensis* (Miller and Northup, 1926) Stunkard, 1934 (Trematoda).” pp. 689-698.
- ef. SVESHNIKOVA, N. M. & SKARBILOVICH, T. S., 1937.—“A study of the penetration of nematodes into the roots of the rubber-plant ‘tau-saghyz’.” pp. 699-712. [In Russian.]
- eg. TAKHISTOV, B. A., 1937.—“Helminthofauna of the *Rangifer tarandus* on the Kola-Peninsula.” pp. 713-716. [In Russian.]
- eh. CHEBOTAREV, R. S., 1937.—“The influence of the helminthological factor on the blood-picture of horses.” pp. 717-719. [In Russian.]
- ei. SHCHERBOVICH, I. A., 1937.—“A study of the efficacy of natrium santoninicum against ascarids of pigs, when applied subcutaneously.” pp. 720-724. [In Russian.]

(732ed) Intersexuality in nematodes is rare. Two cases are recorded in which the intersex is a female but exhibits also in varying degrees the characters of the male. No case has yet been seen in nematodes of an intersex male exhibiting more or less pronounced female characters. Both cases are representatives of new species, viz., *Pseudomermis vanderlindei* n. sp. (host unknown) and *Tetanonema strongylurus* n. g., n. sp. from *Bdellostoma heptatrema*. This new genus is tentatively placed in the subfamily Aproctinae.

R.T.L.

(732ee) *Cercaria quissetensis* encysts in the gills, mantle and foot of various marine molluscs at Woods Hole. Metacercariae were infective 3 days after encystment and became adult *Himasthla* in *Larus argentatus*. The cercarial specific name has been adopted.

R.T.L.

(732ef) Mass infections with *Tylenchorhynchus multincta* (= *T. robustus*) occur in the roots of the seedlings of the rubber-bearing plant “Tau-saghyz” (*Scorzonera tau-saghyz*). The invasion results in maceration of the roots by introduced bacteria. In the field a 63% invasion has been observed causing death from the 10th to 17th day. Certain other nematodes, e.g., *T. pratensis* may be involved. No practical measures of control are yet available.

R.T.L.

(732eg) Dictyocauliasis in the reindeer of the Kola peninsula is due to *Dictyocaulus hadweni*.

R.T.L.

(732eh) Myelocytes are absent in young horses. Eosinophiles do not exceed 1.5%. The leucocytic count is about 6,992 in uninfected animals, as compared with 12,930 for a mixed infection and 11,000 for a strongylidosis infection.

R.T.L.

(732ei) Mass dehelminthization of pigs with ascaris infections calls for the discovery of a suitable purgative which could be given subcutaneously, simultaneously with sodium santonin.

R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- ej. TRAVASSOS, L., 1937.—“ Sur les espèces européennes du genre *Oswaldocruzia*.” pp. 725-733.
- ek. TUAEV, S. M., 1937.—“ The treatment of enterobiosis by carbon tetrachloride.” p. 734. [In Russian.]
- el. UDINTSEV, A. N., 1937.—“ *Diorchis skrjabini* n. sp., a new cestode parasite of *Anas circia* L.” pp. 735-738. [In Russian.]
- em. VAN CLEAVE, H. J., 1937.—“ Developmental stages in acanthocephalan life histories.” pp. 739-743.
- en. VASILKOVA, Z. G., 1937.—“ The rôle of urban dust in the distribution of helminthic infections.” pp. 744-751. [In Russian.]
- eo. VAZ, Z., 1937.—“ *Hempelia hempeli* n. g., n. sp. of spirurid worm parasite of the eyes of Tinamiformes birds.” pp. 752-754.
- ep. VERGEER, T., 1937.—“ No asexual reproduction in *Diphyllbothrium*.” pp. 755-757.
- eq. VSEVOLODOV, B. P., 1937.—“ Pathological changes of the pancreas of sheep infested by *Eurytrema pancreaticum*.” pp. 758-762. [In Russian.]
- er. WEHR, E. E., 1937.—“ Two new species of *Echinuria* (Nematoda; Acuariidae) from birds, with notes on other species of this genus.” pp. 763-768.

(732ej) To the two European species of *Oswaldocruzia*, Travassos adds *O. skrjabini* n. sp. from *Lacerta vivipara*. Two new genera *Trichoskrjabinia* with *T. malayana* (Baylis, 1929) as type and *Schulzia* with *S. subventricosa* (Schneider, 1866) are created. R.T.L.

(732em) No stage in the normal life cycle of an acanthocephalan is free. The eggs are invariably ingested by an arthropod which is devoured by the final host. The name “acanthor” is proposed for the larva which emerges from the embryonic membrane, and “acanthella” for the series of immature stages which develop progressively within the invertebrate intermediary. R.T.L.

(732en) Neither in the town rubbish of Moscow nor on sewage farms, used after one year's delay for the cultivation of vegetables, could microscopical evidence be obtained of potential helminth infection. R.T.L.

(732eo) [For abstract of this paper see Helm. Abs., Vol. V, No. 452d.]

(732ep) Vergeer has repeated without success Fuhrmann's experiment in which plerocercoids of *Diphyllbothrium latum*, after introduction into the lymph spaces of frogs, increased in number, apparently indicating asexual reproduction. R.T.L.

(732eq) Chronic interstitial pancreatitis and, in severe cases, acute necrotic pancreatitis with inflammation of the pancreatic duct, occurs in *Eurytrema* invasion of sheep. R.T.L.

(732er) *Echinuria heterobrachiata* n. sp. from *Larus* spp. and *E. hypognatha* n. sp. from *Oidemia deglandi* are illustrated and described. Brief notes are given on *E. jugadornata*, *E. uncinata* and *E. decorata*. R.T.L.

732 — PAPERS ON HELMINTHOLOGY published in commemoration [cont.] of the 30 year jubileum of K. J. Skrjabin and of 15th anniversary of the All-Union Institute of Helminthology. Moscow, 1937.

- es. WRIGHT, W. H., SCHAFFER, J. M., BOZICEVICH, J. & UNDERWOOD, P. C., 1937.—“Critical anthelmintic tests of some primary monobrom hydrocarbons.” pp. 769-780.
- et. YOKOGAWA, S., 1937.—“On the changes in the blood-picture of healthy persons after experimental infection with *Ancylostoma duodenale*, *Ancylostoma braziliense* and *Necator americanus* either separately or mixed.” pp. 785-791.
- eu. ZAKHAREVICH, G. A., 1937.—“On the epizootology of monieziosis of sheep.” pp. 792-794. [In Russian.]

(732es) Tests have been made on the action of a series of monobrom hydrocarbons on hookworms and ascarids of dogs. N-butyl bromide showed an efficacy of 99.2% for *Ancylostoma caninum* and 100% for ascarids. N-amyl bromide, while not effective for hookworms, removed 99.4% of the ascarids. Neither was effective against *Trichuris vulpis*, *Taenia pisiformis* or *Dipylidium* sp.

R.T.L.

(732et) From experiments on human cases Yokogawa concludes that if eosinophilia which has been reduced to normal by treatment reappears in a slight or medium degree this is evidence of imperfect treatment.

R.T.L.

(732eu) In Kirov few *Moniezia expansa* occur in sheep during winter. Young forms are observed during May. There is a sharp rise in June to 92.8%. For prophylaxis, mature sheep must also be treated as carriers.

R.T.L.

INDEXES.

	PAGE
Index of Authors	256
Index of Periodicals	271
Index of Subjects	278
Corrigenda	309

NOTE.

In all indexes the reference is to the serial numbers and not to the pages. In the indexes of Authors and Subjects numbers in **bold type** indicate abstracts and numbers in Roman type refer to title-only entries.

In the Index of Authors, joint authors are separately listed. Thus, "Jones, A. & Brown, B." would appear also as "Brown, B. with Jones, A."

In the Index of Subjects, alphabetization is under the first word (e.g., "*Acer* sp." before "*Acerina* sp."). Under the generic name of a helminth the following order is observed: Papers on the genus as such; papers on undefined species; papers on new and defined species, e.g.,

- Capillaria*
- spp.
- *aerophila*
- *amarali* n. sp.

In cross-entries under names of hosts, the specific names of new species of helminths are omitted. *Anthelmintics* are listed under that word and also under name of parasite and/or host.

INDEX OF AUTHORS.

(The reference is to the serial numbers : numbers in bold type indicate abstracts.)

- Abdel-Khalik, A. K., 28a.
 Abdul Aziz Khan, M., 192b.
 Abe, S., 57a, 376a.
 Abeles, M. M. with Most, H., 172a.
 Abernathy, C., 143b.
 d'Abreu, A. L., 278b.
 Abuladze, K. I., 732a.
 Ackert, J. E., 732b.
 Ackert, J. E. with Freeman, jr., A. E., 60f.
 Ackert, J. E. with Reid, W. M., 60e.
 Advier, M., 285b.
 Africa, C. M., 34a, 529a.
 Africa, C. M. & Garcia, E. Y., 732c.
 Africa, C. M., Leon, W. de & Garcia, E. Y., 324a, 594c.
 Aievoli, E., 362b.
 Aiga, Y., 431b.
 Akhtar, S. A., 603c, 603l.
 Akhundov, S. G., 543a.
 Aki, K. with Hukuda, S., 198a.
 Alajouanine, T., Thurel, R. & Hornet, T., 600b, 639b.
 Albrand with Sanner, A. & Destribats, 15a.
 Aleksandrov, K. A., 655a.
 Alexander, A. J. P., 84a.
 Alexéiev, K. with Pétrassov, V. F., 552a.
 Alicata, J. E., 182a, 664a, 732d.
 Alicata, J. E. & Swanson, L. E., 32m.
 Alivisatos, C. N., 510a.
 Allen, C. E., 691.
 Allgén, C., 584a.
 Allison, L. N. & Holl, F. J., 143a.
 Almeida, A. de & Monteiro Sales, 447a.
 Almeida, J. Lins de with Freitas, J. F. Teixeira de & Lent, H., 207e.
 Almeida, J. Lins de with Pinto, C., 482c, 732da.
 Alvarez Gonzalez, J. R. with Arenas y Martorell, R., 331b.
 Alves Meira, J. & Shizuo Hosoe, I., 307a.
 Alvey, C. H. & Stunkard, H. W., 732e.
 d'Ambrosio, A., 487c.
 Ambrosioni, P., 487b.
 Ameel, D. J., 114e.
 Ameel, D. J. with La Rue, G. R., 199d.
 American Society of Parasitologists, 322g, 322j.
 Amorim, A., 624a.
 Anagnostidis, N. with Missirloglou, A., 686a.
 Andrews, J. S., 217m.
 Andrews, M. N., 196c, 196e.
 Anido, V. with Basneuvo, J. G., 133h, 206a, 629a.
 Anon, 105a, 108a, 160a, 195a, 195b, 247, 329a, 377a, 399, 455a, 482a.
 Antipin, D. N., 732f.
 Appelmans with Marbaix, 437b.
 Arce, J., 275a, 370a, 458c.
 Arenas, N., Bettinotti, A. E. & Blanchard, O., 347d.
 Arenas y Martorell, R. & Alvarez Gonzalez, J. R., 331b.
 Arenas Martorell, R., Pereira Pérez, R. & Wahlember, A., 133e.
 Arndt, C. H. & Christie, J. R., 126b.
 Arreza-Guzman, A., 3b.
 Ascoli, A., 11a.
 Artili, S. with Vanni, V., 364a.
 Augustine, D. L., 43b, 144b, 144c.
 Aveline, G., 197a.
 Avramoiu, P. & Dâncila, S., 631a.
 Azim, M. A. with Khalil, M., 732bu.
 Babudieri, B., 135e.
 Bacchelli, G., 269f.
 Bachman, G. W., Rodríguez Molina, R., Hoffman, W. A. & Oliver González, J., 223a.
 Bacigalupo, J. & Loretto, G., 55c.
 Bacigalupo, J. & Pasqualini, R. Q., 55b.
 Baer, J. G., 478a.
 Baer, J. G. with Joyeux, C., 51a, 293b, 294b, 480c, 488a, 732bq.
 Baer, J. G. with Joyeux, C. & Martin, R., 87b.
 Baker, D. W., 491c, 491e.
 Baker, D. W. & Fincher, M. G., 184c.
 Balanzario Rosas, I., 555b, 555c.
 Balmès, J. with Leenhardt & Boucomont, 439a.
 Balozet, L., 18a, 80a, 466b.
 Barber, D. R. with Staniland, L. N., 14a.
 Barberousse, C. M. with Cantonnet Blanch, P. & Charlone, R., 445a.
 Barlow, C. H., 11.
 Barnett, G., 636a.
 Barnett, L., 209a, 579a.
 Barnett, L. E. with Mason, A. J., 450a.
 Barss, H. P., Wingard, S. A., Buhner, E. M., Steiner, G. & Tyler, J., 216a.
 Basile, A. R. with Spangenberg, J. J. & Gianni, L. di, 347b.
 Basir, M. A. with Mirza, M. B., 603a.
 Basnuevo, J. G. & Anido, V., 133h, 206a, 629a.
 Basnuevo, J. G. with Calvo, R. & Kouri, P., 133d.
 Basnuevo, J. G. with Calvo Fonseca, R. & Kouri, P., 629c, 629d.
 Basnuevo, J. G. with Kouri, P. & Calvo Fonseca, R., 629b.
 Battaglia, A. & Fiore, H. di, 347c.
 Baudet, E. A. R. F., 59a, 74a, 141a, 732g.
 Baufle, P. with Fiessinger, N., 634a.
 Baumgartner, A., 367b.
 Baumgartner, E. A. & Cowles, A., 30a.
 Bau-Prussakowa, S., 598a.
 Bayles, G. W., 673b.

INDEX OF AUTHORS.

- Baylis, H. A., 45b, 75a, 212e, 261b, 261c.
 Bayon, H. P., 240a.
 Beams, H. W. & King, R. L., 274a.
 Beams, H. W. with King, R. L., 42b.
 Bearup, A. J., 118a.
 Beatty, H. A. with O'Connor, F. W., 115a.
 Beaux, A. R., 347e.
 Beaver, P. C., 99a, 199g.
 Beck, R., 300a, 608a.
 Becker, J. G., 553a.
 Beekman, F., 262a.
 Begg, R. C., 278a.
 Beigbeder with Ufferte, 637a.
 Belkin, G. Y., 732h.
 Belozeroval-Siplyakova, O. M., 732i.
 Beneden, van, Derouaux, Houyez & Masson, H., 328a.
 Benedetti-Valentini, F., 596a.
 Bennett, H. J. & Re, J. D., 47d.
 Bennett, W., 579b.
 Berberian, D. A. with Turner, E. L. & Dennis, E. W., 32c.
 Bercoff, S. with Weller, E. S., 500c.
 Bercovitz, Z., 2b.
 Berghe, L. van den, 19c, 52a, 74c, 111f, 167c, 257e, 644c.
 Berghe, L. van den & Vuylsteke, C., 644b.
 Berkman, I. I., 677c.
 Bernardi, B. de, 224i.
 Berny, P. & Gippet, E., 285c.
 Bertrand, C. with Montestruc, E., 480b.
 Best, E. W. with Johnston, T. H., 650b.
 Bettinotti, A. E. with Arenas, N. & Blanchard, O., 347d.
 Bhaduri, N. V. with Maplestone, P. A., 189a, 311c.
 Bhalerao, G. D., 111e, 352b, 352c, 732j.
 Bhattacharjee, J., 190a, 192a.
 Bianchi, G., 617a.
 Biecheler & Lafourcade, 382a.
 Biester, H. E. & Eveleth, D. F., 1f.
 Biggart, J. H., 33a.
 Bilger, F. & Branzau, P., 538a.
 Billimoria, H. S. with Napier, L. E., 309a.
 Blacklock, D. B., 76c.
 Blanchard, O. with Arenas, N. & Bettinotti, A. E., 347d.
 Blassian, E. with Nasta, T., 626a.
 Blind, 58b.
 Blount, W. P., 240b.
 Bodenheimer, F. S., 560a.
 Boev, S. N., 732k.
 Bogliolo, L., 365a.
 Bohn, G., 400.
 Bonaba, J. & Soto, J., 436a.
 Bonham, K. & Guberlet, J. E., 114k.
 Bonne, C., 24a, 97c, 164a.
 Bonnet, A., 610a.
 Bonne-Wepster, J., 304a.
 Bornand, M., 481a.
 Bosher, J. E. with Newton, W. & Hastings, R. J., 88b, 88c.
 Botreau-Roussel, 523a.
 Bouckaert, J. with Thoonen, J. & Verstraete, A., 676a.
 Boucomont with Leenhardt & Balmès, J., 439a.
 Boughton, R. V., 661a.
 Bourguignon, G. C., 4a.
 Bovien, P., 66a, 234a.
 Boyd, W. with James, E., 288a.
 Bozicevich, J., 550a.
 Bozicevich, J. with Wright, W. H. & Gordon, L. S., 193b.
 Bozicevich, J. with Wright, W. H. & Rose, J., 675a.
 Bozicevich, J. with Wright, W. H., Schaffer, J. M. & Underwood, P. C., 732es.
 Brackett, S. with Cort, W. W., 114j, 114n, 322i.
 Brackett, S. with Cort, W. W. & McMullen, D. B., 322f.
 Brand, T. v., 32e, 114g, 114u.
 Brandi, R. with Guilherme, I., 621a.
 Branscheid, F., 647b.
 Branzau, P. with Bilger, F., 538a.
 Brenes, R. with Fermoselle Bacardí, J., 331a.
 Bretschneider, L. H. with Hirsch, G. C., 493a, 611a.
 Brewster, W., 401.
 Britton, J. W., 295a.
 Brogniart, M., 692.
 Brouet-Sainton, J. with Loeper, M., 435a.
 Brown, H. W., 162b.
 Brug, S. L., 188b, 304g.
 Brug, S. L. & Tesch, J. W., 304d.
 Brüggemann, H., 402.
 Bruns, H., 68a.
 Bruns, W., 403.
 Buchanan, R. M., 318b.
 Buckley, J. J. C., 318f.
 Buhrer, E. M. with Barss, H. P., Wingard, S. A., Steiner, G. & Tyler, J., 216a.
 Bullock, F. D., Curtis, M. R. & Dunning, W. F., 410a.
 Bullock, F. D. with Dunning, W. F. & Curtis, M. R., 696.
 Burdelev, T. E., 732 l.
 Burgehe, T. with Hortolomei, N. & Gherashim, M., 245b.
 Burkill, H. J., 582a.
 Burt, D. R. R., 485a.
 Butz, L. W. & La Lande, jr., W. A., 194a.
 Bychowsky, B. E., 465a.
 Byrd, E. E., 114c, 130a, 212a, 217s.
 Byrd, E. E. & Denton, J. F., 217t.
 Bywater, H. E., 301a.

INDEX OF AUTHORS.

- Caballero y C., E., 133c, 165a, 165b, 256a, 256b, 256c, 257c.
 Caeiro, J. A., 458f.
 Caizzone, G., 269a.
 Calcagno, B. N. & Manfredi, F. J., 458b.
 Calcagno, B. N., Vivoli, D. & Corbella, E. G., 458h.
 Calhoun, F. P., 438a.
 Calvó, R., Kouri, P. & Basnuevo, J. G., 133d.
 Calvó Fonseca, R., Kouri, P. & Basnuevo, J. G., 629c, 629d.
 Calvó Fonseca, R. with Kouri, P. & Basnuevo, J. G., 629b.
 Cameron, T. W. M., 16a, 16b, 40a, 89a, 286b, 287b, 672c, 732m.
 Campbell, D. H., 199a.
 Campbell, W. A., 389d.
 Campo, J. C. del & Vázquez-Piera, L. A., 270c.
 Canard, 643a.
 Canavan, W. P. N., 322c.
 Cangi, C. W., 184a.
 Cantonnet Blanch, P., Charlone, R. & Barberousse, C. M., 445a.
 Caronia, G., 269c.
 Carrère, P., 91a, 92d.
 Carroll, J. & McMahon, E., 29c.
 Casis Sacre, G. & Rico Bustamante, F., 330a.
 Casparis, H. with Faust, E. C. & Dwyer, H. L., 323a.
 Cassan with Toupet, Moreau & Dariaux, 282a.
 Castay, 531a.
 Castellani, A. & Jacono, I., 305b.
 Castellanos, A., Vázquez Paussa, A. & Paussa Trujillo, J., 457a.
 Castex, M. R. & Greenway, D., 456a.
 Castilla, D. with Fernandez, F., 224c.
 Castillo, P. A. with Sala Panisello, F., 444a.
 Castle, R. M. with Hadley, C. E., 368b.
 Catron, L., 219b.
 Cauchemez, L., 640c.
 Cavina, G., 440a.
 Cawston, F. G., 13a, 36b, 36c, 36d, 36f, 45a, 56a, 115b, 201a, 308a, 326c, 385a, 646a, 654a, 672b.
 Chagas, E., 224j.
 Chamberlin, W. E. with Ross, I. C. & Turner, H. N., 315a.
 Chandler, A. C., 162d, 162e, 237d.
 Charlone, R. with Cantonnet Blanch, P. & Barberousse, C. M., 445a.
 Charlone, R. & Sacco-Ferraro, L., 270a, 270d.
 Chaton, M., 558a.
 Chaves, J., 469a.
 Chebotarev, R. S., 732eh.
 Chekin, V. Y., 544b.
 Chen, H. T., 3d, 203a, 203b, 341a, 547a.
 Chen-Chao-Hsi with Tchou Su, 91b.
 Chifflet, A., 446b.
 Chifflet, A. & Purriel, P., 446a.
 Ch'in, Y. T., 90c.
 Chitwood, B. G., 47e, 217h, 732n.
 Chitwood, B. G. & Chitwood, M. B., 153, 540a, 575a.
 Chitwood, B. G. with Foster, A. O., 217 i.
 Chitwood, B. G. with Jacobs, L., 217i.
 Chitwood, M. B. with Chitwood, B. G., 153, 540a, 575a.
 Choisy, H. de, 635b.
 Chow, C. Y. with Hsü, H. F., 17b.
 Christie, J. R., 313a.
 Christie, J. R. with Arndt, C. H., 126b.
 Christie, J. R. with Crossraan, L., 215a.
 Chu, C. F., 290d.
 Chu, H. J. with Hoepli, R., 704.
 Chu, T. C., 203e.
 Chu, T. C. with McCoy, O. R., 90i.
 Ciancarelli, S., 127a.
 Cicchitto, A. M., 362a.
 Cicchitto, A. M. & Cicchitto, E., 345a.
 Cicchitto, E., 269e.
 Cieza Rodríguez, M., 416a.
 Cimino, V., 81a.
 Clapham, P. A., 29g.
 Clark, H. C. with Foster, A. O., 2a.
 Claussen, L., 297b.
 Coatney, G. R. with Meserve, F. G., 114s.
 Coatney, G. R. & Roudabush, R. L., 413c.
 Cobb, G. S., 217c.
 Cochaux, I., 423a.
 Cockell, W. C., 533a.
 Colas-Belcour, J. with Roubaud, E., 87d.
 Collier, jr., V., 428a.
 Collins, B. J. with Hall, M. C., 131a, 131b.
 Collins, C. G. with Miller, H. E., 262b.
 Collins, J. C., 646b.
 Coninck, L. A. P. de, 454a.
 Corbella, E. G. with Calcagno, B. N. & Vivoli, D., 458h.
 Corradetti, A., 135d.
 Cort, W. W. & Brackett, S., 114j, 114n, 322i.
 Cort, W. W. with Foster, A. O., 32g.
 Cort, W. W., McMullen, D. B. & Brackett, S., 322f.
 Cort, W. W. & Otto, G. F., 732o.
 Costantini & Le Génissel, 472b.
 Costantini & Oulié, 348a.
 Cott, L., 517a.
 Cottier, W. with Muggeridge, J., 339a.
 Couch, J. N., 526a.
 Coursières with Delastre, 667a.
 Couzi, G. with Marchat, J., 166b.
 Cowles, A. with Baumgartner, E. A., 30a.
 Craig, C. F. & Faust, E. C., 693.

INDEX OF AUTHORS.

- Craig, J. F. & Davies, G. O., 240c, 240d.
Cram, E. B., 47h, 732p.
Cram, E. B., Jones, M. F., Reardon, L. & Nolan, M. O., 353a.
Cram, E. B. with Wright, W. H., 411a.
Crawford, W. W., 199e.
Crenn, R., 549a.
Cresson, 556a.
Crisafulli, A., 269b.
Cross, S. X. with Harwood, P. D., Spindler, L. A. & Cutler, J. T., rk.
Crossman, L. & Christie, J. R., 215a.
Cumming, H. S., 86a.
Curtis, M. R. with Bullock, F. D. & Dunning, W. F., 410a.
Curtis, M. R. with Dunning, W. F. & Bullock, F. D., 696.
Cutler, J. T. with Harwood, P. D., Spindler, L. A. & Cross, S. X., rk.
Cuvillier, E., 233a, 732q.
Dadashyan, A. M., 677b.
Daengsvang, S. with Prommas, C., 32q.
Dal Lago, R. with Pavlovsky, A. & Vogogna, E., 500b.
Dammin, G. J., 319b.
Dâncila, S. with Avrâmoiu, P., 631a.
Dang-van-Ngu with Galliard, H. & Phan-huy-Quat, 284c.
Danks, G., 491b.
Dariaux with Toupet, Moreau & Cassan, 282a.
Dartevelde, E. with Schwetz, J., 19d, 423b.
Das Gupta, C. R. with Napier, L. E., 101a.
Datta, M. N., 618a.
Davey, D. G., 42a, 337a.
Davies, G. O. with Craig, J. F., 240c, 240d.
Davtyan, E. A., 732r.
Day, H. B., 144a.
Dedieu, P., 570a.
Dedova, N. P. with Podyapolskaya, V. P., 732dc.
Deeds, D., 609c.
Delastre & Coursières, 667a.
Demidova, A. Y., 732s.
Denecke, K., 8a.
Dennis, E. W., 32d.
Dennis, E. W. with Turner, E. L. & Berberian, D. A., 32c.
Denton, J. F. with Byrd, E. E., 217t.
De Rivas, D., 732dn.
Derouaux with Beneden, van, Houyez & Masson, H., 328a.
Descazeaux, J., 480a.
Desoille, H., 639a.
Destribats with Sanner, A. & Albrand, 15a.
Dévé, F., 19a, 19b, 110a, 558b, 640a.
Dew, H. R., 658a.
Deyneka, I. Y., 386a.
Dikmans, G., 116b, 217n, 732t.
Dimitriu, O. with Zotto, G. & Radacovici, E., 92a.
Dinnik, N. N., 732u.
Dinnik, Y. A. & Dinnik, N. N., 552g, 732v.
Dinter, 67a.
Diss, M. A., 92c.
Djaenoedin, R. with Kraneveld, F. C., 576a.
Dollfus, R. P., 74d, 283a.
Dopf with Maitrerobert, 421a.
Dory, J., 694.
Douglas, J. R. with Stewart, M. A. & Miller, R. F., 522a.
Dragonas, E. & Vlavianos, G., 567a.
Drechsler, G., 571a.
Dreyfus, A., 562a, 622a, 622b.
Drummond, F. H., 607a.
Dubois, G., 167b, 361a, 479a.
DuBourguet with Perrignon de Troyes, 473b.
Dubrovin, E. A. & Petrov, M. I., 732w.
Dumont, E., 41a, 695.
Dunning, W. F. with Bullock, F. D. & Curtis, M. R., 410a.
Dunning, W. F., Curtis, M. R. & Bullock, F. D., 696.
Duprat, 132a.
Dwyer, H. L. with Faust, E. C. & Casparis, H., 323a.
Echenique, R. C., 276a.
Edwards, E. E., 111d, 318e.
Eerkens, J. W. & Horst, G. A. van der, 304e.
Efendiev, M. E., 544c.
Efendiev, M. E. with Popov, P. P. & Tuayev, S. M., 732df.
Efimov, A. with Krashenninnikov, S., 119e.
Efimov, A. Z., 732x.
Ehrlich, I., 671a.
Eichenberger, A., 367a.
Ejsmont, L., 257d.
Ekbaum, E., 114 l.
Ekelov, M. M., 677a.
Elkind, M. S., 601a.
Elperin, M. A., 119d.
Elsbach, E. M., 97b, 97e.
Engel, E., 612a.
Enigk, K. with Wetzel, R., 93c, 231a, 371b, 371c, 393a.
Ernek, E., 656a.
Erokhin, I. P. with Losev, L. A. & Nikanorov, A. F., 732cd.
Ershov, V. S., 732y.
Ershov, V. S. & Malyguine, S. A., 552i.
Eskola, O., 501a.
Espie, A., 86c.
Ettisch, G. & Gomes da Costa, S. F., 490a.
Ertorre, E., 268a.

INDEX OF AUTHORS.

- Eveleth, D. F. with Biester, H. E., 1f.
 Everse, J. W. R., 304f.
 Ext, W. & Goffart, H., 394b.
- Faerman, I. M., 583a.
 Farges, 166a.
 Fauque, M. C. J., 641a.
 Faust, E. C., 26a, 697, 732z.
 Faust, E. C. with Craig, C. F., 693.
 Faust, E. C., Dwyer, H. L. & Casparis, H., 323a.
 Faust, E. C. with King, E. L. & Sanders, J. T., 138a.
 Favia, N., 168a.
 Fedyushin, A. V., 732ba.
 Feng, L. C., 698, 732bz.
 Fenstermacher, R., 184b.
 Fenstermacher, R. with Olsen, O. W. & Pomeroy, B. S., 295b.
 Fenwick, D. W., 196f.
 Fermoselle Bacardi, J. & Brenes, R., 331a.
 Fernandez, F. & Castilla, D., 224c.
 Ferrari, R. C. with Ivanishevich, O., 458d.
 Ferwerda, S. with Tenhaeff, C., 236a.
 Fiessinger, N. & Baufle, P., 634a.
 Fincher, M. G. with Baker, D. W., 184c.
 Fiore, H. di with Battaglia, A., 347c.
 Florescu, B., 463a.
 Flores López, R., 627a.
 Fluiter, H. J. de, 272a.
 Foggie, A., 29d.
 Fonseca, L. da with Froilano de Mello, I., 603h.
 Forbes, J. C. & McConnell, J. S., 129a.
 Förizs, G., 545a.
 Foster, A. O., 1c.
 Foster, A. O. & Chitwood, B. G., 217 l.
 Foster, A. O. & Clark, H. C., 2a.
 Foster, A. O. & Cort, W. W., 32g.
 Foster, A. O. with Landsberg, J. W., 1g.
 Foster, A. O. & Ortiz O., P., 199b.
 Frankenberg, G.v., 564a.
 Franklin, M. T., 111a, 111b, 111c.
 Franklin, M. T. with Hurst, R. H., 29b.
 Fraser, A. H. H. & Robertson, D., 29h.
 Frauchiger, E., 228a.
 Frazer, W. P., 390b.
 Freeborn, S. B. & Stewart, M. A., 176a.
 Freeman, jr., A. E. & Ackert, J. E., 60f.
 Freise, F. W., 592a.
 Freitas, J. F. Teixeira de, 207f.
 Freitas, J. F. Teixeira de & Lent, H., 207b, 207i, 334a, 334c, 417a, 417b, 563a, 732cb.
 Freitas, J. F. Teixeira de with Lent, H., 207a, 207g, 207j, 334d, 334e, 732ca.
 Freitas, J. F. Teixeira de, Lent, H. & Almeida, J. Lins de, 207e.
- Friedrich, H., 486a.
 Froilano de Mello, I., 699, 700.
 Froilano de Mello, I. & Fonseca, L. da, 603h.
 Fuchs, A. G., 398a.
 Fuhrmann, O., 701.
 Fujita, T., 459b.
 Fukada, C., 530d.
 Fukada, S. with Morikawa, Y., 31a.
 Fundaminski, I., 674a.
- Gacoba, C. with Nolasco, J. O., 569a.
 Gagarin, V. G. with Petrov, A. M., 732dg.
 Gaibov, A. D., 732bb.
 Galliard, H., 92b, 167f, 178b, 284b, 420a.
 Galliard, H., Dang-van-Ngu & Phan-huy-Quat, 284c.
 Gallien, L., 3c, 167e.
 Galli-Vallerio, B., 151a.
 Gallot, H. M. with Laignel-Lavastine, d'Heucqueville, G. & Mignot, H., 422a.
 Galtsoff, P. S., Lutz, F. E., Welch, P. S. & Needham, J. G., 154.
 Galván Campos, F., 555a.
 Gambles, R. M., 492a.
 Ganguli, S. K. with Ukil, A. C., 102a.
 Garcia, E. Y. with Africa, C. M., 732c.
 Garcia, E. Y. with Africa, C. M. & Leon, W. de, 324a, 594c.
 Garcia, E. Y. with Refuerzo, P. G., 594a, 594e.
 García-Capurro, F. with Piaggio-Blanco, R. A., 446c, 633a.
 García Rivera, A., 628a.
 Garin, C., 320a, 480d.
 Garin, C. & Roman, E., 285e, 548a, 548b, 548d.
 Gasic, G. with Neghme, A., 625a.
 Gazzzi, C., 291b.
 Gebert, S., 61a.
 Ghalioungui, P. with Mahtouz Fikri, M., 117a.
 Gharpure, P. V. & Gharpure, V. V., 25a.
 Gheorghiu, C., 292a.
 Gherashim, M. with Hortolomei, N. & Burghete, T., 245b.
 Gianni, L. di with Spangenberg, J. J. & Basile, A. R., 347b.
 Giaquinto Mira, M., 5a.
 Gilbert, L. I., 732bc.
 Gill, D. G. with Smith, W. H. Y. & McAlpine, J. G., 72a.
 Giovannola, A., 135c, 227a.
 Gippet, E. with Berny, P., 285c.
 Gminder, E., 266d.
 Gnedina, M. P., 732bd.
 Göbel, E. F., 461a.
 Gobert, E., 87a.
 Godfrey, G. H. & Hagan, H. R., 126a.
 Godfrey, M. F., 433a.

INDEX OF AUTHORS.

- Godkin, J. with Pinckard, J. A. & Henderson, R. G., 46a.
Goff, C. C. with Watson, J. R., 179b.
Goffart, H., 394a.
Goffart, H. with Ext, W., 394b.
Golczyński, Z., 557a.
Goldey, A., 145a.
Goldschmidt, R., 702.
Gomes da Costa, S. F. with Ertisch, G., 490a.
Gomes da Costa, S. F. & Raymond-Hamer, 434a.
Gomes de Moraes, R., 482b, 482d.
Gómez Camejo, M. & Vidal Vidal, R., 133g.
Gonggrijp, L. & Soedigdo, R., 188c.
Gönnert, R., 703.
Gonzalez Bosch, R. & Mosto, D., 128a.
Goodey, T., 196a, 196b, 318c, 318d, 732be.
Gordon, H. McL., 173c.
Gordon, H. McL. with Graham, N. P. H., 173b.
Gordon, L. S. with Wright, W. H. & Bozicevich, J., 193b.
Gordon, R. F., 389e.
Gorshkov, I. P., 732bf.
Gorshunova, O. K., 732bg.
Gorter, A. J., 304b.
Gotschall, M. J. with Wardle, R. A. & Horder, L. J., 665a.
Gottlieb, B., 48c.
Goyanes Alvarez, J., 3a.
Graham, G. L., 47k, 732bh.
Graham, H. B., 39c.
Graham, N. P. H., 451a.
Graham, N. P. H. & Gordon, H. McL., 173b.
Graham, R., Torrey, J. P., Mizelle, J. D. & Michael, V. M., 183a.
Graves, E. F., 105b, 105c.
Gray, H. K., 609d.
Grazia, A. di, 586a.
Graziani, A., 511a.
Grazzini, A., 565a.
Greenfield, J. G. & Pritchard, B., 460a.
Greenway, D., 416b.
Greenway, D. with Castex, M. R., 456a.
Gregson, J. D., 212d.
Greig, E. D. W., 185a.
Grieder, H., 69a, 648a, 648b.
Griffiths, H. J., 180b.
Grigerek, H., 497c.
Grini, O., 122a.
Gros, O., 265a.
Guberlet, J. E. with Bonham, K., 114k.
Guerra, J. L., 556b.
Guilherme, I. & Brandi, R., 621a.
Guillier, G., 285d.
Guillier, M., 15b.
Gunawardana, S. A., 289a.
Gushanskaya, L. K., 732bi.
Hadley, C. E. & Castle, R. M., 368b.
Hagan, H. R. with Godfrey, G. H., 126a.
Hahn, T. F., 317a.
Hall, A. A., 260a.
Hall, M. C., 73a, 131c, 222a, 732bk.
Hall, M. C. & Collins, B. J., 131a, 131b.
Hallén, L. E., 659b.
Halpérine, M. O., 552h.
Haltenorth, T., 371d.
Harada, Y. with Yamagishi, M. & Moritani, K., 325a.
Hare, T., 147a.
Harkawy, N., 4b.
Harmand, J. with Richon, Verain & Leichtmann, 638a.
Harnisch, O., 684a.
Harshey, K. R., 603d.
Harwood, P. D., 49p.
Harwood, P. D., Spindler, L. A., Cross, S. X. & Cutler, J. T., 1k.
Hassan, A., 537a.
Hassan, A. with Khalil, M. & Salah, M., 266e.
Hastings, R. J. & Newton, W., 88a.
Hastings, R. J. with Newton, W. & Bosher, J. E., 88b, 88c.
Hausser, G. F., 142a.
Headlee, W. H., 527a.
Heidegger, E., 248, 336a, 432a.
Heijde, C. G. van der, 97d.
Heine, 93b.
Heinemann, E., 69c, 244d, 494a, 494b, 503a, 503c, 546a.
Heinze, K., 150a.
Hems, B. A. & Todd, A. R., 109a.
Henderson, R. G. with Pinckard, J. A. & Godkin, J., 46a.
Henry, A., 619a.
Hernández, A., 359a.
d'Heucqueville, G. with Laignel-Lavastine, Gallot, H. M. & Mignot, H., 422a.
Hickman, C. J. with Walton, C. L. & Ogilvie, L., 77a, 107c.
Hinman, E. H., 61c, 201b.
Hinshaw, H. C., 609f.
Hirsch, G. C. & Bretschneider, L. H., 493a, 611a.
Hissette, J., 561a.
Hobmaier, A., 732bl.
Hobmaier, M., 368c, 732bm.
Hobmaier, M. & Meyer, K. F., 368d.
Hockley, A. R., 264a.
Hodson, W. E. H., 251a.
Hoepli, R., 213d.
Hoepli, R. & Chu, H. J., 704.
Hoepli, R. with Hu, C. H., 90b.
Hoffman, W. A. with Bachman, G. W., Rodriguez Molina, R. & Oliver Gonzalez, J., 223a.
Hoffman, W. A. with Rodriguez-Molina, R., 49a.
Hohorst, W., 573a.

INDEX OF AUTHORS.

- Holl, F. J. with Allison, L. N., 143a.
Hölldobler, K., 244b.
Holzer, G., 705.
Honess, R. F., 167d.
Hopkins, S. H., 32h.
Horder, L. J. with Wardle, R. A. & Gotschall, M. J., 665a.
Hornet, T. with Alajouanine, T. & Thurel, R., 600b, 639b.
Horsfall, M. W. & Jones, M. F., 322a.
Horst, G. A. van der with Eerkens, J. W., 304e.
Hortolomei, N., Burghel, T. & Gherashim, M., 245b.
Houyez with Beneden, van, Derouaux & Masson, H., 328a.
Howard, D. M., 210a.
Hsieh, C. K. with Wang, S. H., 290e.
Hsü, D. Y., 378a.
Hsü, H. F. & Chow, C. Y., 17b.
Hsü, H. F. & Khaw, O. K., 706.
Hsü, S. C. & Kê, C. T., 90g.
Hu, C. H. & Hoeppli, R. J. C., 90b.
Hu, S. M. K., 203f, 591c.
Hu, S. M. K., Wong, H. & Li, B. C., 290a.
Hübner, F., 150c.
Hübscher, H., 642a.
Hudson, R., 672a, 672c.
Hughes, R. C. with Rankin, jr., J. S., 60b.
Hukuda, S. & Aki, K., 198a.
Hukuda, S. with Morikawa, Y., 321a.
Hull, R. with Roebuck, A., 318g.
Hungerford, T. G., 250a.
Hunter, III, G. W. 732bn.
Hurst, R. H. & Franklin, M. T., 29b.
Hurst, R. H. & Triffitt, M. J., 29a.
Hutson, L. R., 239a.
- Iamandi with Nicolesco, P. & Strat, C., 464a.
Iamandi, G. G. & Teclu, M., 167a.
Impallomeni, R., 306a, 615a.
Indian Science Congress, 604b, 604c.
Israel, A. H. with Jabre, E., 221b.
Isshiki, O., 528a.
Isshiki, O. & Ogata, S., 528c.
Ivanissevich, O. & Ferrari, R. C., 458d.
Ivanitski, S. V. & Krasnov, Y. G., 732bo.
Ivanov, A. S. & Murigin, I. I., 732bp.
Iyengar, M. O. T., 102b.
- Jabre, E. & Israel, A. H., 221b.
Jacobs, L. & Chirwood, B. G., 217i.
Jacono, I. with Castellani, A., 305b.
Jacquet, J., 707.
Jakoubovitch, S. A. with Konus, E. M., 119a.
Jalet, J., 472a.
James, E. & Boyd, W., 288a.
- Janiszewska, J., 471a, 489a.
Janney, jr., J. H. with Otto, G. F., 1d.
Januszkiewicz, S., 557b.
Jepps, M. W., 341c.
Jerace, F., 364b.
Jerstad, A. C., 105d.
Jesus, Z. de & Mallari, A. I., 593b.
Johannsen, H., 708.
Johannsen, H. with Schmid, F., 297a.
Johnson, L. R. & Thompson, H. W., 112a.
Johnston, C. C., 120a.
Johnston, T. H., 605a, 650a, 650c, 650d.
Johnston, T. H. & Best, E. W., 650b.
Jones, M. F. with Cram, E. B., Reardon, L. & Nolan, M. O., 353a.
Jones, M. F. with Horsfall, M. W., 322a.
Jones, T. R., 82a.
Jones, M. & Wells, J. J., 383a.
Jospin, Y., 15c.
Joyeux, C., 600a, 600c.
Joyeux, C. & Baer, J. G., 51a, 293b, 294b, 480c, 488a, 732bq.
Joyeux, C., Baer, J. G. & Martin, R., 87b.
Joyeux, C. & Sautet, J., 294c.
- Kahl, W., 150b.
Kaka, A. G., 192d.
Kamalov, N. G., 205a.
Kamalov, N. G. with Kandelaki, S. P., 552d.
Kambosseff, S., 245a.
Kaminski, F. O. with Schulz, R. E. S., 732dv.
Kan, H. C. & Vogel, H., 709.
Kandelaki, S. P. & Kamalov, N. G., 552d.
Kariadi, 97a.
Karokhin, V. I., 732br.
Kasakow, P. T., 567b.
Katsurada, F., 710, 732bs.
Kauzal, G. P., 173a.
Kawada, T. with Shimizu, K., 530a.
Kawai, T., 57b, 139c.
Kê, C. T. with Hsü, S. C., 90g.
Keller, 284a, 420b.
Keller, A. E., 566a.
Keller, A. E. with Leathers, W. S., rh.
Keller, A. E. with Leathers, W. S. & Knox, J. C., 254a.
Keller, H., 242a.
Keller, M., 437a.
Kenawy, M. R., 117d.
Kevorkov, N. & Sirkina, S., 732bt.
Khalil, M., 28b, 711.
Khalil, M. & Azim, M. A., 732bu.
Khalil, M., Hassan, A. & Salah, M., 266e.
Khaw, O. K. with Hsü, H. F., 706.
Khefets, K. B. & Skublevskaya, M. V., 374b.

INDEX OF AUTHORS.

- Khokhlova, N. A., 552c.
King, E. L., Faust, E. C. & Sanders, J. T., 138a.
King, R. L. & Beams, H. W., 42b.
King, R. L. with Beams, H. W., 274a.
Kirmann, E., 685a.
Kirshner, A. with Southwell, T., 76b, 170a, 170b, 263b, 724.
Kleinebrecht, W., 271a.
Kloos, G., 577a.
Kneebone, J. Le M., 39b.
Knoll, D., 712.
Knott, J., 49b.
Knox, J. C. with Keller, A. E. & Leathers, W. S., 254a.
Kobayasi, T., 520a.
Kofoid, C. A., Williams, O. L. & Veale, N. C., 384a.
Kolbe, F., 67c, 148b, 392a.
Kolmakov, D. V., 732bv.
Kon, Y., 663a.
Konus, E. M. & Jakubovitch, S. A., 119a.
Kopirin, A. V., 732bw.
Koppisch, E., 614a.
Köpps, H., 242b.
Kotlán, S. & Vajda, L., 161a.
Kotthoff, P., 426a.
Koulikoff, N. S., 680a.
Kouri, P., 206b.
Kouri, P., Basnuevo, J. G. & Calvo Fonseca, R., 629b.
Kouri, P. with Calvo, R. & Basnuevo, J. G., 133d.
Kouri, P. with Calvo Fonseca, R. & Basnuevo, J. G., 629c, 629d.
Kraft, E., 498a, 713.
Kraneveld, F. C. & Djaenoedin, R., 576a.
Krashenninnikov, S. & Efimov, A., 119e.
Krasnov, Y. G. with Ivanitski, S. V., 732bo.
Krastin, N. I., 375a, 732by.
Krayner, O., 327a.
Kreis, H. A., 70b, 70c, 126c, 396b.
Krivoshta, E. E. with Pukhov, V. I. & Velichkin, P. A., 732dj.
Kröber, F., 266c.
Krüger, F., 648b.
Krüger, W., 496a.
Krull, W. H., 217r.
Ku, C. T., 591d, 591e.
Kuflik, W. E., 714.
Kulikov, N. S. & Tamarin, I. B., 732bx.

Lachowicz, J. P., 612b.
Lafourcade with Biecheler, 382a.
Lagos García, A. with Ruiz Morena, M. & Lascano González, J. C., 458a.
Laiguel-Lavastine, Gallot, H. M., d'Heucqueville, G. & Mignot, H., 422a.
Lal, M. B., 603b, 603j.

La Lande, jr., W. A. with Butz, L. W., 194a.
Landivar, A. F., 55a.
Landivar, A. F. & Leoni Iparraguirre, C. A., 458e.
Landsberg, J. W., 162a.
Landsberg, J. W. & Foster, A. O., 1g.
Lane, C., 63a, 144d, 326a, 326b.
Lapage, G., 100a, 155.
Lapeyre, J. L., 314a.
Larghero-Ibarz, P., 270b.
Larsen, N. P. & Shinn, J., 664b.
La Rue, G. R. & Ameel, D. J., 199d.
Lascano González, J. C. with Ruiz Morena, M. & Lagos García, A., 458a.
Lauber, 647a.
Lavabre, P. with Roubier, C. & Morénas, L., 548c.
Law, R. G., 497b.
Leathers, W. S. & Keller, A. E., 1h.
Leathers, W. S. with Keller, A. E. & Knox, J. C., 254a.
Ledoux, E., 634a.
Le Duc, A. C. J. M., 715.
Leenhardt, Boucomont & Balmès, J., 439a.
Legendre, F., 178a.
Le Génissel with Costantini, 472b.
Leichtmann with Richon, Verain & Harmand, J., 638a.
Leigh, W. H., 368a.
Leiper, J. W. G., 196d, 389f.
Lent, H. & Freitas, J. F. Teixeira de, 207a, 207g, 207j, 334d, 334e, 732ca.
Lent, H. with Freitas, J. F. Teixeira de, 207b, 207i, 334a, 334c, 417a, 417b, 563a, 732cb.
Lent, H. with Freitas, J. F. Teixeira de & Almeida, J. Lins de, 207e.
Lentz, R. W., 174b.
Leon, W. de with Africa, C. M. & Garcia, E. Y., 324a, 594c.
Leoni Iparraguirre, C. A. with Landivar, A. F., 458e.
Lerche, 67b.
Levine, P. P., 199c, 199i.
Levitina, P. S., 543b.
Levi-Valensi, A., 85a.
Li, B. C. with Hu, S. M. K. & Wong, H., 290a.
Li, J. C., 229a, 591a.
Li, L. Y., 38a, 203d.
Licht, E., 515a.
Lindau, H., 140a.
Linford, M. B., 54c, 214a, 217a, 217b.
Linford, M. B. & Oliveira, J. M., 54d.
Ling, L. C. & Yao, Y. T., 17c.
Linton, E., 732cc.
Liu, K., 290b.
Locori, E., 291a.
Loeper, M. & Brouet-Sainton, J., 435a.
Lombard, C., 636b.

INDEX OF AUTHORS.

- Lorenzo, F. de, 512a.
 Loretti, G. with Bacigalupo, J., 55c.
 Losev, L. A., Erokhin, I. P. & Nikanorov, A. F., 732cd.
 Lozano, F. S. with Rossi, R., 415a, 620c.
 Luccioni, G., 511b.
 Lucker, J. T. & Schaffer, J. M., 673c.
 Lucker, J. T. with Schwartz, B., 732dy.
 Lüders, H., 266a.
 Łukasiak, J., 678b.
 Lundmark, F., 659a.
 Luttermoser, G., 322h.
 Lutz, F. E. with Galtsoff, P. S., Welch, P. S. & Needham, J. G., 154.
 Lyaiman, E. M., 732ch.
 Lysaght, A. M., 106b.
 Lyubchenko, S. D., 732cg.
 Lyubimova, A. P., 732ce.
 Lyubimova, M. P., 732cf.

 McAlpine, J. G. with Smith, W. H. Y. & Gill, D. G., 72a.
 McAnally, E. A., 202a.
 McBeth, C. W., 47c, 217f, 217g.
 McColl, E. L. with Wardle, R. A., 287a.
 McConnell, J. S. with Forbes, J. C., 129a.
 McCoy, O. R. & Chu, T. C., 90i.
 MacFarlane, W. V., 578a.
 McIntosh, A., 47f, 47g, 114t.
 McKenna, C. T., 525a.
 McLeod, J. A., 322b.
 McMahon, E. with Carroll, J., 29c.
 McMullen, D. B., 32p, 114h, 114i.
 McMullen, D. B. with Cort, W. W. & Brackett, S., 322f.
 McMullen, W. H., 350a.
 McNaught, J. B. with Pierce, jr., G. N., 219a.
 Macy, R. W., 732ci.
 Mäder, E., 69d.
 Madhavan Pillai, V. with Sweet, W. C., 311d.
 Magarinos Torres, C. & Pacheco, G., 521a.
 Magath, T. B., 1e, 193a, 732cj.
 Magath, T. B. with Smith, H. L., 609b.
 Maggio, P., 303b.
 Mahal, H. S., 603e.
 Mahfouz Fikri, M. & Ghalioungui, P., 117a.
 Maier, C., 53a.
 Mainzer, F., 136a.
 Maitre Robert & Dopf, 421a.
 Makar, N., 316a, 316b.
 Malchartzeck, H. W., 506a.
 Malevich, I. I. with Murashkintsev, N. S., 732cq.
 Malevitzkaja, M. A., 119c.
 Malign, S. A., 732cl.
 Malkani, P. G., 310a.
 Mallari, A. I., 593a.
 Mallari, A. I. with Jesus, Z. de, 593b.

 Maloberti, U., 362c.
 Malyguine, S. A. with Erchov, V. S., 552i.
 Manfredi, F. J. with Calcagno, B. N., 458b.
 Manson-Bahr, P., 48a, 380a.
 Manter, H. W., 32k, 404, 732ck.
 Maplestone, P. A., 25b.
 Maplestone, P. A. & Bhaduri, N. V., 189a, 311c.
 Maplestone, P. A. & Mukerji, A. K., 311b.
 Marbaix & Appelmanns, 437b.
 Marchat, J. & Couzi, G., 166b.
 Marcucci, G., 440b.
 Mariani, G., 335a.
 Markowski, S., 471b.
 Martillotti, F., 590a.
 Martin, R. with Joyeux, C. & Baer, J. G., 87b.
 Martini, F., 484a.
 Martins, A. V., 12a.
 Masilungan, V. A. with Tubangui, M. A., 343a, 594b, 594d.
 Mason, A. J. & Barnett, L. E., 450a.
 Masson, H. with Beneden, van, Derouaux & Houyez, 328a.
 Mathias, P., 293a.
 Matoff & Wapzarowa, 149a.
 Matoff, K., 140b.
 Matoušek, J., 656b.
 Matsumoto, T., 660a.
 Mattes, O., 652a.
 • Mazzitelli, M., 332a.
 Mehra, H. R., 244a.
 Meier, K., 429a.
 Meijer, W. C. P., 576b.
 Menshikov, F. K. & Ponomareva, E. V., 374a.
 Meserve, F. G. & Coatney, C. R., 114s.
 Metivier, H. V. M., 62a.
 Meyer, 21a.
 Meyer, A., 397a.
 Meyer, K. F. with Hobmaier, M., 368d.
 Meyer, R., 83a.
 Michael, V. M. with Graham, R., Torrey, J. P. & Mizelle, J. D., 183a.
 Mieng with Roton, 177a.
 Mignot, H. with Laignel-Lavastine, Gallot, H. M. & d'Heucqueville, G., 422a.
 Mikatić, D., 387a.
 Miki, Y., 211a.
 Milford, J. J. with Stunkard, H. W., 687a.
 Milks, H. J. with Stephenson, H. C., 491a.
 Miller, H. E. & Collins, C. G., 262b.
 Miller, M. J., 89b, 89c.
 Miller, R. F. with Stewart M. A., & Douglas, J. R., 522a.
 Millul, G., 344a.
 Minchin, R. L. H., 117b.

INDEX OF AUTHORS.

- Miretski, O. Y., 732cm.
 Mirizzi, P. L., 348b.
 Mirza, M. B. & Basir, M. A., 603a.
 Missirloglou, A. & Anagnostidis, N., 686a.
 Miura, G., 572b.
 Miyata, I. with Yamaguti, S., 312b.
 Mizelle, J. D., 413b, 673a.
 Mizelle, J. D. with Graham, R., Torrey, J. P. & Michael, V. M., 183a.
 Molinari-Tosatti, P., 513a.
 Mönning, H. O., 23b, 95a, 133a, 186a, 536a, 732co.
 Monteiro Sales with Almeida, A. de, 447a.
 Montestruc, E. & Bertrand, C., 48ob.
 Montgomerie, R. F., 524a.
 Moorthy, V. N., 32j, 114f, 114p, 217j.
 Moreau with Toupet, Dariaux & Cassan, 282a.
 Morénas, L. with Roubier, C. & Lavabre, P., 548c.
 Mori, J., 651a.
 Morikawa, Y. & Fukuda, S., 31a, 321a.
 Moritani, K. with Yamagishi, M. & Harada, Y., 325a.
 Morley, L. C. with Shillinger, J. E., 502b.
 Morson, A. C., 48b.
 Moskalev, B., 732cp.
 Most, H. & Abeles, M. M., 172a.
 Mosto, D. with Gonzalez Bosch, R., 128a.
 Moura Campos, F. A. de with Silveira, T., 521b.
 Mozgovoi, A. A., 732cn.
 Mueller, J. F., 47n, 114r, 137a, 217o, 413a.
 Muggeridge, J. & Cottier, W., 339a.
 Mühlens, P., 9b, 79a.
 Mukerji, A. K. with Maplestone, P. A., 311b.
 Mukherjee, P. K. with Roy, D. N., 263c, 263d.
 Müller, H. & Tesch, J. W., 304c.
 Müller, W., 683a.
 Murakami, S., 124b.
 Murashkintsev, N. S. & Malevich, I. I., 732cq.
 Murigin, I. I. with Ivanov, A. S., 732bp.
 Murin, J., 462a.
 Nagaty, H. F., 354a.
 Nain, M., 285a.
 Napalkov, N. I., 668a.
 Napier, L. E. & Billimoria, H. S., 309a.
 Napier, L. E. & Das Gupta, C. R., 101a.
 Narihara, N., 139a, 139b, 376b.
 Näsmark, K. E., 690a.
 Nasta, T. & Blassian, E., 626a.
 Needham, J. G. with Galtsoff, P. S., Lutz, F. E. & Welch, P. S., 154.
 Neghme, A., 625b.
 Neghme, A. & Gasic, G., 625a.
 Neugebauer, W., 298a.
 Neujean, G., 258a.
 Newton, W., Boshier, J. E. & Hastings, R. J., 88c.
 Newton, W. with Hastings, R. J., 88a.
 Newton, W., Hastings, R. J. & Boshier, J. E., 88b.
 Nicolescu, C., 632a.
 Nicolesco, P., Strat, C. & Iamandi, 464a.
 Nigrelli, R. F., 687b.
 Niimi, D., 528b.
 Nikanorov, A. F. with Losev, L. A. & Erokhin, I. P., 732cd.
 Niño, F. L., 224a, 224b.
 Nishiyama, S. with Sugimoto, M., 528d, 535a.
 Nitsen, R. van, 4c.
 Noble, A. E. & Noble, G. A., 60a.
 Noble, A. E. & Park, J. T., 237c.
 Nolan, M. O. with Cram, E. B., Jones, M. F. & Reardon, L., 353a.
 Nolasco, J. O. & Gacoba, C., 569a.
 Nordström, G., 653a.
 Norman, J. P., 554a.
 Noronha, A. J., 36a.
 Nosik, A. F., 732cr.
 Notti, P., 224g.
 Nouvel, J. with Urbain, A. & Pasquier, M. A., 466a.
 Nystrand, F., 580b.
 Obitz, K. & Wadowski, S., 588a.
 Ochapovskaya, N. V., 669b.
 O'Connor, F. W., 36e.
 O'Connor, F. W. & Beatty, H. A., 115a.
 Odlaug, T. O., 453a.
 Oesterlin, M., 684c.
 Ofteigsson, O. J., 609e.
 Ogata, S. with Isshiki, O., 528c.
 Ogilvie, L. with Walton, C. L. & Hickman, C. J., 77a, 107c.
 Okabe, K., 187a, 425a, 508a.
 Oldham, J. N., 732cs.
 Oliveira, J. M. with Linford, M. B., 54d.
 Oliver González, J. with Bachman, G. W., Rodríguez Molina, R. & Hoffman, W. A., 223a.
 Olsen, O. W., 32a, 471, 217q, 237a, 322e.
 Olsen, O. W., Fenstermacher, R. & Pomeroy, B. S., 295b.
 Onsy, A., 238a.
 Oppermann, T., 140c, 235b.
 Orfila, J. A., 224c.
 Orlov, I. V., 732ct.
 Orlov, N. P. et al., 732cu.
 Ortiz O., P. with Foster, A. O., 199b.
 Ortlepp, R. J., 23a, 35a, 340a, 585a, 585b, 585c, 585d.
 Otero, J. P., 446d.

INDEX OF AUTHORS.

- Otto, G. F. with Cort, W. W., 732o.
 Otto, G. F. & Janney, jr., J. H., rd.
 Otto, J. H., 9a, 171a, 290c.
 Oulié with Costantini, 348a.
 Ozaki, Y., 534a, 732cv.
- Pablo, V. E. de, 62ob.
 Pacheco, G. with Magarinos Torres, C., 521a.
 Palais, M., 87e.
 Palais, M. with Sautet, J., 635a.
 Palimpsestov, M. A., 732cw.
 Palombi, A., 135a, 135b.
 Pandazis, G., 716.
 Pande, B. P., 169a, 169b, 261a, 603g, 606a, 606c.
 Pankov, N. P., 552e.
 Panova, L. G., 732cx.
 Paraskevas, M., 486b.
 Paretskaya, M. S. with Shulman, E. S., 732du.
 Park, J. T., 60c, 199f.
 Park, J. T. with Noble, A. E., 237c.
 Parnell, I. W., 96a, 96b, 146a, 180a, 181a.
 Pascale, H. with Pessôa, S. B., 357a, 418a, 418b, 419a, 504b, 505a.
 Pasqualini, R. Q. with Bacigalupo, J., 55b.
 Pasquier, M. A. with Urbain, A. & Nouvel, J., 466a.
 Paussa Trujillo, J. with Castellanos, A. & Vázquez Paussa, A., 457a.
 Pave, S. & Rossi, F., 224h.
 Pavlov, P., 167g, 167h, 167i, 257b.
 Pavlovsky, A., Dal Lago, R. & Vogogna, E., 500b.
 Penfold, H. B., 118b, 118d.
 Penfold, W. J. & Penfold, H. B., 29e.
 Penfold, W. J., Penfold, H. B. & Phillips, M., 29f, 204a, 551a.
 Peniche Cantón, R., 360a.
 Penington, A. H., 118c.
 Penso, G., 10a, 269d, 345b, 405.
 Penso, G. & Vianello, G., 487e.
 Perdomo Hurtado, B., 509a.
 Pereira, C., 442a, 732cy.
 Pereira Pérez, R. with Arenas Martorell, R. & Wahlembert, A., 133e.
 Pérez Viguera, I., 225a.
 Perras, T., 499a.
 Perrignon de Troyes & DuBourguet, 473b.
 Pervakov, A. Y., 732cz.
 Pessôa, S. B., 504a.
 Pessôa, S. B. & Pascale, H., 357a, 418a, 418b, 419a, 504b, 505a.
 Pétrassov, V. F. & Alexiev, K., 552a.
 Petráček, E., 483a.
 Petrov, A. M. & Gagarin, V. G., 732dg.
 Petrov, M. I. with Dubrovin, E. A., 732w.
 Pfaffenrath, F., 542b.
- Pfeiffer, 613a.
 Phan-huy-Quat with Galliard, H. & Dang-van-Ngu, 284c.
 Phillips, M. with Penfold, W. J. & Penfold, H. B., 29f, 204a, 551a.
 Piaggio-Blanco, R. A. & García-Capurro, F., 446c, 633a.
 Pierce, jr., G. N. & McNaught, J. B., 219a.
 Pinckard, J. A., Godkin, J. & Henderson, R. G., 46a.
 Pin-dji Chen, 143c.
 Pino, 458g.
 Pinto, C. & Almeida, J. Lins de, 482c, 732da.
 Pisa, G. di with Serio, F., 616a.
 Podder, T. N., 212b, 356a.
 Podyapolskaya, V. P. & Dedova, N. P., 732dc.
 Podyapolskaya, V. P. with Skryabin, K. I., 552j.
 Poenaru-Căplesco, C., 626b.
 Poggio, E. di, 303a.
 Poletaev, P. A., 544a.
 Polichetti, E., 424a.
 Pollock, J. W., 389b.
 Pomeroy, B. S. with Olsen, O. W. & Fenstermacher, R., 295b.
 Pomini, F., 448a.
 Ponomareva, E. V. with Menshikov, F. K., 374a.
 Pons, J. A., 614b.
 Pons, J. A. with Rodriguez-Molina, R., 224d.
 Popkov, I. G., 391a.
 Popov, P. P., Efendiev, M. E. & Tuae, S. M., 732df.
 Popova, K. A., 732de.
 Popova, N. V. with Shikhobalova, N. P., 732ds.
 Popova, Z. G., 732dd.
 Porter, D. A., 32f.
 Porter, D. A. with Schwartz, B., 133b.
 Porter, W. B., 253a.
 Potemkina, V. A., 732dh.
 Potter, C. C., 217p.
 Póvoa, H., 620a.
 Prather, P. F., 390a.
 Prendel, A. R., 732di.
 Price, E. W., 37b, 471, 47j, 116a, 123a, 732db.
 Pritchard, B. with Greenfield, J. G., 460a.
 Proença, M. C., 207d, 334b.
 Prommas, C. & Daengsvang, S., 32q.
 Provenzano, D., 370b.
 Pujatti, P., 487a.
 Pukhov, V. I., Krivoshta, E. E. & Velichkin, P. A., 732dj.
 Purriel, P. with Chifflet, A., 446a.
 Purvis, G. B., 263e.
 Pushmenkov, E. P., 732dk.
- Quillatre, A., 477a.

INDEX OF AUTHORS.

- Radacovici, E. with Zotta, G. & Dimitriu, O., 92a.
 Rademaker, L., 373a.
 Raevskaya, Z. A., 732dl.
 Raevski, V. N., 732dm.
 Rahim-ud-din, M., 103a.
 Rahm, G., 213b, 246a.
 Ramirez Ulloa, J., 358a.
 Rankin, J. S., 299a.
 Rankin, jr., J. S., 32b.
 Rankin, jr., J. S. & Hughes, R. C., 60b.
 Rao, M. A. N., 190b.
 Ratchkowski, B., 518a.
 Ravetta, M., 98a.
 Raymond-Hamet with Gomes da Costa, S. F., 434a.
 Rayski, C., 678c.
 Re, J. D. with Bennett, H. J., 47d.
 Reardon, L. with Cram, E. B., Jones, M. F. & Nolan, M. O., 353a.
 Reaud, A., 226a.
 Redman, W. D., 388a.
 Reed, A. C., 602a.
 Rees, G., 221a.
 Refuerzo, P. G. & Garcia, E. Y., 594a, 594e.
 Reid, W. M. & Ackert, J. E., 60e.
 Renteria, J. R., 630a.
 Repetto, R. L., 347a.
 Reves, jr., M., 458i.
 Richardson, L. R., 89d.
 Richon, Verain, Harmand, J. & Leichmann, 638a.
 Rico Bustamante, F. with Casis Sacre, G., 330a.
 Rietz, J. H., 27a.
 Rivoir, J., 452a.
 Robert, J., 15d.
 Roberts, F. H. S., 50a, 173d, 355a, 449a, 467a.
 Robertson, D., 230a, 369a, 717.
 Robertson, D. with Fraser, A. H. H., 29h.
 Rodhain, J., 718.
 Rodhain, J. & Vuylsteke, C., 74b.
 Rodriguez Molina, R. with Bachman, G. W., Hoffman, W. A. & Oliver González, J., 223a.
 Rodriguez-Molina, R. & Hoffman, W. A., 49a.
 Rodriguez-Molina, R. & Pons, J. A., 224d.
 Rodriguez Villegas, R. & Schena, A. T., 277a.
 Roebuck, A. & Hull, R., 318g.
 Roman, E., 294a.
 Roman, E. with Garin, C., 285e, 548a, 548b, 548d.
 Rose, J. with Wright, W. H. & Bozicevich, J., 675a.
 Ross, I. C., 39a.
 Ross, I. C., Chamberlin, W. E. & Turner, H. N., 315a.
 Rossi, F. with Pave, S., 224h.
 Rossi, R. & Lozano, F. S., 415a, 620c.
 Rothschild, M., 6a.
 Roton & Mieng, 177a.
 Roubaud, E., 87g.
 Roubaud, E. & Colas-Belcour, J., 87d.
 Roubier, C., Morénas, L. & Lavabre, P., 548c.
 Roudabush, R. L. with Costney, G. R., 413c.
 Roy, D. N. & Mukherjee, P. K., 263c, 263d.
 Rudakov, V. S., 732do.
 Ruiz Morena, M., Lagos García, A. & Lascano González, J. C., 458a.
 Rushton, W., 574a.
 Russo, F., 441a.
 Rutkevich, N. L., 732dp.
 Sacco, R., 363a.
 Sacco-Ferraro, L. with Charlone, R., 270a, 270d.
 Sai-Ryo, 113a, 198b, 198c, 198d, 198e.
 Saito, M., 530b, 530c.
 Sakai, M. with Suzuki, T., 587a.
 Salah, M. with Khalil, M. & Hassan, A., 266e.
 Sala Panisello, F. with Castillo, P. A., 444a.
 Salhoff, S., 174a.
 Sambasiva Rao, M., 202b.
 Sanders, J. T. with King, E. L. & Faust, E. C., 138a.
 Sandground, J. H., 76a, 322d, 644a, 732dq.
 Sanner, A., Destribats & Albrand, 15a.
 Sant'Anna, J. F., 719.
 Santos Barbosa, S. dos, 623a.
 Sargent, R. M., 13b, 372a.
 Sargent, W. S., 383b.
 Sarles, M. P. with Taliaferro, W. H., 54a.
 Sarnowski, v., 174c.
 Sautet, J. with Joyeux, C., 294c.
 Sautet, J. & Palais, M., 635a.
 Sawitz, W., 255a.
 Scaduto, P., 81b.
 Schachter, M., 267a.
 Schaffer, J. M. with Lucker, J. T., 673c.
 Schaffer, J. M. with Wright, W. H., Bozicevich, J. & Underwood, P. C., 732es.
 Schapiro, M. M., 321.
 Scheifley, C. H., 1j, 609a.
 Schena, A. T. with Rodriguez Villegas, R., 277a.
 Scheppach, K., 679a.
 Schiel, O., 681a.
 Schindler, R., 720.
 Schipull, H. with Schmid, F., 243a.
 Schirrmeister, E., 495a.
 Schmehle, H., 721.
 Schmid, F., 21b, 156, 273a, 297c.

INDEX OF AUTHORS.

- Schmid, F. & Johanssen, H., 297a.
 Schmid, F. & Schipull, H., 243a.
 Schmidt, R., 46b.
 Schneider, W., 7a.
 Schönfeld, W., 78a.
 Schoop, 497a.
 Schulz, R. E. S. & Kaminski, F. O., 732dv.
 Schulz, R. E. S. & Shikhobalova, N., 119b.
 Schulz, R. E. S. with Skryabin, K. I., 474a.
 Schuurmans Stekhoven, jr., J. H., 249, 333a, 722, 732dx.
 Schwartz, B., 502c, 649a.
 Schwartz, B. & Lucker, J. T., 732dy.
 Schwartz, B. & Porter, D. A., 133b.
 Schwetz, J. & Dartevelde, E., 19d, 423b.
 Scott, J. A., 32n, 32o, 71a, 71b, 115c, 254b, 254c.
 Seck, P., 427a.
 Seidel, 58a.
 Seidl, O., 682a.
 Seifried, O., 406.
 Sellers, T. F. with Sunkes, E. J., 163a.
 Semenov, V. D., 468a, 468b.
 Semrad, J. E., 412a.
 Senevet, G., 723.
 Senseman, L. A., 645a.
 Serfontein, P. J., 301a.
 Serio, F. & Pisa, G. di, 616a.
 Serra, G., 81c, 514a.
 Seurat, G., 476a.
 Shadin, V. I., 381a.
 Shaw, J. N., 581a.
 Shaw, L., 46c.
 Shcherbovich, I. A., 732ei.
 Sheldon, A. J., 1a, 1b, 32i, 162f, 162g, 162h.
 Shibaev, L. P., 732dr.
 Shikhobalova, N. with Schulz, R. E. S., 119b.
 Shikhobalova, N. P., 552b.
 Shikhobalova, N. P. & Popova, N. V., 732ds.
 Shillinger, J. E., 502a.
 Shillinger, J. E. & Morley, L. C., 502b.
 Shimizu, K. & Kawada, T., 530a.
 Shinn, J. with Larsen, N. P., 664b.
 Shishkin, G. N., 732dt.
 Shizuo Hosoe, I. with Alves Meira, J., 307a.
 Shorb, D. A., 217e.
 Shulman, E. S. & Paretskaya, M. S., 732du.
 Shumakovich, E. E., 732dw.
 Sikar, 338a.
 Silveira, T. & Moura Campos, F. A. de, 521b.
 Silverio, M., 87c.
 Sima, I., 408a.
 Simon, F., 237b.
 Sindoni, M., 134a.
 Sirkina, S. with Kevorkov, N., 732bt.
 Sitowski, L., 678a.
 Skarbilovich, T. S. with Sveshnikova, N. M., 732ef.
 Skryabin, K. I. & Podyapolskaya, V. P., 552j.
 Skryabin, K. I. & Schulz, R. E. S., 474a.
 Skublevskaya, M. V. with Kheifets, K. B., 374b.
 Skvortsov, A. A., 732dz.
 Smith, H. L. & Magath, T. B., 609b.
 Smith, W. H. Y., McAlpine, J. G. & Gill, D. G., 72a.
 Smithers, D. W., 117c.
 Smyrniotis, P. C., 316c, 531b.
 Smythe, R. H., 240e, 389c.
 Snieckiene, P., 670a.
 Sobolev, A. A., 732ea.
 Soedigdo, R. with Gonggrijp, L., 188c.
 Sokolova-Andronova, E. V., 732eb.
 Soós, A., 152b, 409a.
 Sorondo Campaneria, E., 331c.
 Sotiricu, S. with Tsamboulas, N., 589a.
 Soto, J. with Bonaba, J., 436a.
 Southwell, T. & Kirshner, A., 76b, 170a, 170b, 263b, 724.
 Spangenberg, J. J., Basile, A. R. & Gianni, L. di, 347b.
 Spindler, L. A., 37a, 217k.
 Spindler, L. A. with Harwood, P. D., Cross, S. X. & Cutler, J. T., 1k.
 Spink, W. W., 121a.
 Sprehn, C., 732ec.
 Srivastava, H. D., 252a.
 Staffieri, D., 500a.
 Staniland, L. N. & Barber, D. R., 14a.
 Stayitch, 342a.
 Stefanini, J., 473a.
 Stefański, W., 725.
 Stefański, W. & Strankowski, M., 726.
 Steiner, G., 47o, 214b, 217d, 723ed.
 Steiner, G. with Barss, H. P., Wingard, S. A., Buhner, E. M. & Tyler, J., 216a.
 Stephenson, H. C. & Milks, H. J., 49ra.
 Steward, J. S., 125a.
 Stewart, M. A., 491d.
 Stewart, M. A. with Freeborn, S. B., 176a.
 Stewart, M. A., Miller, R. F. & Douglas, J. R., 522a.
 Stoll, N. R., 47m, 162c, 727.
 Storbeck, F., 266b.
 Strankowski, M., 688a.
 Strankowski, M. with Stefański, W., 726.
 Strat, C. with Nicolesco, P. & Iamandi, 464a.
 Strom, J., 666a.
 Strong, R. P., 43a, 61b.
 Stunkard, H. W., 229b, 414a, 732ee.
 Stunkard, H. W. with Alvey, C. H., 732e.
 Stunkard, H. W. & Milford, J. J., 687a.

INDEX OF AUTHORS.

- Subrahmanian, K., 246b.
 Suga, Y., 124a.
 Sugimoto, M. & Nishiyama, S., 528d, 535a.
 Summers, W. A., 199 1.
 Sunkes, E. J. & Sellers, T. F., 163a.
 Susoni, A. H., 728.
 Sutton, S. W., 279b.
 Suzuki, T. & Sakai, M., 587a.
 Sveshnikova, N. M. & Skarbilovich, T. S., 732ef.
 Swales, W. E., 286a.
 Swanson, L. E. with Alicata, J. E., 32m.
 Swarup, R., 192c.
 Sweet, W. C. & Madhavan Pillai, V., 311d.
 Syôgaki, Y., 459a.
 Szidat, L., 244c, 393c, 689a.
 Takahasni, C., 587b.
 Takhistov, B. A., 732eg.
 Taliaferro, W. H. & Sarles, M. P., 54a.-
 Talice, R. V., 270e.
 Tamarin, I. B. with Kulikov, N. S., 732bx.
 Tanai, F., 44a.
 Tanaka, S., 232a.
 Tarassov, V., 257g, 655b.
 Tashiro, F., 572a.
 Taylor, A. C., 191a.
 Taylor, E. L., 22a, 65a, 218a, 389a, 672d.
 Tchou Su & Chen-Chao-Hsi, 91b.
 Teclu, M. with Iamandi, G. G., 167a.
 Teixeira, J. C. with Villella, G. G., 30b.
 Tenenbaum, J., 104a.
 Tenhaeff, C. & Ferwerda, S., 236a.
 Tesch, J. W., 188a.
 Tesch, J. W. with Brug, S. L., 304d.
 Tesch, J. W. with Müller, H., 304c.
 Tetley, J. H., 208a.
 Thapar, G. S., 604a.
 Thomas, J. F. H., 107a.
 Thomas, L. J., 54b, 114a, 114b, 199j.
 Thompson, H. W. with Johnson, L. R., 112a.
 Thoonen, J., Verstraete, A. & Bouckaert, J., 676a.
 Thorne, G., 47a, 47b, 595a.
 Thurel, R. with Alajouanine, T. & Horner, T., 600b, 639b.
 Tiedge, 235a.
 Timon-David, J., 257f, 281a.
 Tisserand, G., 640b.
 Todd, A. R. with Hems, B. A., 109a.
 Toledo Sumoza, E., 555d.
 Tomita, S., 139d.
 Tomoff, W., 395a.
 Toole, H., 431a.
 Torrey, J. P. with Graham, R., Mizelle, J. D. & Michael, V. M., 183a.
 Tötterman, G., 580a.
 Toupet, Moreau, Dariaux & Cassan, 282a.
 Townsend, G. R., 179a.
 Travassos, L., 207c, 207b, 563b, 568a, 732ej.
 Trawiński, A., 148c, 396a, 470a, 519a.
 Trewn, H. S., 311a.
 Triffitt, M. J. with Hurst, R. H., 29a.
 Truong-Tan-Ngoc, 285f.
 Tsamboulas, N. & Sotiricu, S., 589a.
 Tso, C. T., 90c.
 Tuaev, S. M., 732ek.
 Tuaev, S. M. with Popov, P. P. & Efendiev, M. E., 732df.
 Tubangui, M. A. & Masilungan, V. A., 343a, 594b, 594d.
 Tulaganow, A., 152a.
 Turner, E. L., Dennis, E. W. & Berberian, D. A., 32c.
 Turner, H. N. with Ross, I. C. & Chamberlin, W. E., 315a.
 Tyler, J. with Barss, H. P., Wingard, S. A., Buhrer, E. M. & Steiner, G., 216a.
 Udintsev, A. N., 732el.
 Ufferte & Beigbeder, 637a.
 Ukil, A. C. & Ganguli, S. K., 102a.
 Ullrich, H., 21c.
 Underwood, P. C. with Wright, W. H., Schaffer, J. M. & Bozicevich, J., 732es.
 Unger, 148a.
 Unverricht, W., 662a.
 Urbain, A., Nouvel, J. & Pasquier, M. A., 466a.
 Urechia, C. I., 280a.
 Vajda, T. with Kotlán, S., 161a.
 Van Cleave, H. J., 212c, 516a, 541a, 732em.
 Vanni, V., 259a, 335b, 597a.
 Vanni, V. & Attili, S., 364a.
 van Someren, V. D., 279a, 318a.
 Varshavskiy, Y. K., 669a.
 Vasilkova, Z. G., 552f, 732en.
 Vaz, Z., 732eo.
 Vazquez Pausa, A., 443a.
 Vázquez Pausa, A. with Castellanos, A. & Pausa Trujillo, J., 457a.
 Vázquez-Piera, L. A. with Campo, J. C. del, 270c.
 Veale, N. C. with Kofoid, C. A. & Williams, O. L., 384a.
 Velichkin, P. A. with Pukhov, V. I. & Krivoshta, E. E., 732dj.
 Velu, H. & Zottner, G., 87f, 175a.
 Verain with Richon, Harmand, J. & Leichtmann, 638a.
 Vergeer, T., 732ep.
 Vermooten, V., 539a.
 Verstraete, A. with Thoonen, J. & Bouckaert, J., 676a.
 Vianello, G., 487d.
 Vianello, G. with Penso, G., 487e.

INDEX OF AUTHORS.

- Vidal Vidal, R. with Gómez Camejo, M., 133g.
Vidyarthi, R. D., 261d, 349a, 603f, 606b.
Viljoen, N. F., 585e.
Villejean, A., 86b.
Vilela, G. G. & Teixeira, J. C., 30b.
Vivoli, D. with Calcagno, B. N. & Corbella, E. G., 458h.
Vlavianos, G. with Dragonas, E., 567a.
Vogel, H., 70a.
Vogel, H. with Kan, H. C., 709.
Vogelsang, E. G., 224f.
Vogogna, E. with Pavlovsky, A. & Dal Lago, R., 500b.
Vsevolodov, B. P., 732eq.
Vuylsteke, C. with Berghe, L. van den, 644b.
Vuylsteke, C. with Rodhain, J., 74b.
Wadowski, S. with Obitz, K., 588a.
Wager, V. A., 23c.
Wahlembert, A. with Arenas Martorell, R. & Pereira Pérez, R., 133e.
Walker, J. H., 351a.
Walker, T., 64a, 221b.
Wallace, F. G., 114d.
Walton, A. C., 114o.
Walton, C. L., 77b, 107b.
Walton, C. L., Ogilvie, L. & Hickman, C. J., 77a, 107c.
Wang, S. H. & Hsieh, C. K., 290e.
Wantland, W. W., 319a.
Wapzarowa with Matoff, 149a.
Ward, H. L., 237e.
Wardle, R. A., 89e, 729.
Wardle, R. A., Gotschall, M. J. & Horder, L. J., 665a.
Wardle, R. A. & McColl, E. L., 287a.
Warwick, T., 106a.
Watson, J. R. & Goff, C. C., 179b.
Watt, J. Y. C., 17a.
Webb, J. L., 341b.
Wehr, E. E., 60d, 346a, 388b, 732er.
Welch, P. S. with Galtsoff, P. S., Lutz, F. E. & Needham, J. G., 154.
Weller, E. S. & Bercoff, S., 500c.
Wells, J. J. with Joses, M., 383a.
Wertheim, P., 542a.
Wetzel, R., 20a, 93a, 296a, 366a, 371a.
Wetzel, R. & Enigk, K., 93c, 231a, 371b, 371c, 393a.
Whitlock, J. H., 388c.
Whitlock, S. C., 199h.
Wickramasuriya, G. A. W., 407.
Wilde, J., 69b, 503b.
Wilkening, H., 730.
Williams, O. L., 114q.
Williams, O. L. with Kofoed, C. A. & Veale, N. C., 384a.
Williamson, G., 532a.
Wilson, G. F., 200a.
Wimeersch, H. M. van, 305a.
Winfield, G. F., 90a, 90d, 90f.
Winfield, G. F. & Yao, T. N., 90h.
Wingard, S. A. with Barss, H. P., Buhner, E. M., Steiner, G. & Tyler, J., 216a.
Winton, D., 94a.
Wisniewski, L. W., 489b, 559a, 688b.
Wong, H. with Hu, S. M. K. & Li, B. C., 290a.
Woodland, W. N. F., 220a, 352a.
Wottge, K., 611b.
Wotton, R. M., 657a.
Wright, W. H., 133f.
Wright, W. H., Bozicevich, J. & Gordon, L. S., 193b.
Wright, W. H., Bozicevich, J. & Rose, J., 675a.
Wright, W. H. & Cram, E. B., 411a.
Wright, W. H., Schaffer, J. M., Bozicevich, J. & Underwood, P. C., 732es.
Wu, C. F., 213c.
Wu, K., 203c, 213a, 257a, 263a, 591b.
Wydrin, A., 241a.
Wymeersch, H. M. O. van, 243c, 423d.
Yamagishi, M., Harada, Y. & Moritani, K., 325a.
Yamaguti, S., 157, 158, 159, 199k, 312a, 312c.
Yamaguti, S. & Miyata, I., 312b.
Yao, T. N. with Winfield, G. F., 90h.
Yao, Y. T. with Ling, L. C., 17c.
Ymaz Apphatie, I. L., 599a.
Yokogawa, S., 379a, 732et.
Yokoyama, T., 31b.
Young, R. T., 114m.
Zakharevich, G. A., 732eu.
Zanen, J., 475a.
Zdun, W. K., 507a.
Zeliff, C. C., 130b.
Zeller, A., 430a.
Zhukova, E. V., 732bj.
Zimmermann, H. R., 393b.
Zontschew, W. T., 731.
Zotta, G., Radacovici, E. & Dimitriu, O., 92a.
Zottner, G. with Velu, H., 87f, 175a.

INDEX OF PERIODICALS.

(The reference is to the serial numbers : not to the pages.)

- Advisory Leaflet. Ministry of Agriculture and Fisheries. London, 160.
 Agricultural Gazette of New South Wales, 250.
 Agricultural Progress, 251.
 Agriculture and Live-Stock in India, 252.
 Allatorvosi Lapok, 161, 408.
 Allattani Közlemények, 409.
 American Heart Journal, 253.
 American Journal of Cancer, 410.
 American Journal of Diseases of Children, 411.
 American Journal of Hygiene, 1, 71, 162, 254.
 American Journal of Public Health, 72, 163, 255.
 American Journal of Roentgenology and Radium Therapy, 412.
 American Journal of Tropical Medicine, 2, 73, 164.
 American Midland Naturalist, 413.
 American Museum Novitates, 414.
 Anales de la Facultad de Ciencias Médicas. Buenos Aires, 415.
 Anales de la Facultad de Ciencias Médicas de La Plata, 416.
 Anales del Instituto de Biología, 165, 256.
 Annaes da Academia Brasileira de Sciencias, 417.
 Annaes da Faculdade de Medicina da Universidade de São Paulo, 418.
 Annaes Paulistas de Medicina e Cirurgia, 419.
 Annales de l'École Supérieure de Médecine et de Pharmacie Indochine, 420.
 Annales de la Faculté Française de Médecine et de Pharmacie de Beyrouth, 421.
 Annales de Médecine et de Pharmacie Coloniales, 166.
 Annales Médico-Psychologiques, 422.
 Annales de Parasitologie Humaine et Comparée, 3, 74, 167, 257.
 Annales de la Société Belge de Médecine Tropicale, 4, 258, 423.
 Annali d'Igiene, 5, 168, 259.
 Annali Italiani di Chirurgia, 424.
 Annals of Internal Medicine, 260.
 Annals and Magazine of Natural History, 6, 75, 169, 261.
 Annals of Surgery, 262.
 Annals of Tropical Medicine and Parasitology, 76, 170, 263.
 Annotationes Zoologicae Japonenses, 425.
 Annual Report of the Agricultural and Horticultural Research Station. Long Ashton, 77.
 Annual Report. Avon Biological Research. University College, Southampton, 264.
 Anzeiger für Schädlingkunde, 426.
 Archiv für Dermatologie und Syphilis, 78.
 Archiv für Entwicklungsmechanik der Organismen, 427.
 Archiv für Experimentelle Pathologie und Pharmakologie, 265.
 Archiv für Experimentelle Zellforschung, 428.
 Archiv für Geschichte der Medizin und der Naturwissenschaften, 429.
 Archiv für Hydrobiologie. Supplement-Band, 7, 430.
 Archiv für Hygiene und Bakteriologie, 8.
 Archiv für Klinische Chirurgie, 431.
 Archiv für Schiffs- und Tropen-Hygiene, 9, 79, 171, 266.
 Archiv für Wissenschaftliche und Praktische Tierheilkunde, 432.
 Archives de l'Institut Pasteur de Tunis, 80.
 Archives Internationales de Pharmacodynamie (et de Thérapie), 434.
 Archives des Maladies de l'Appareil Digestif et des Maladies de la Nutrition, 435.
 Archives de Médecine des Enfants, 436.
 Archives Médico-Chirurgicales de Province, 267.
 Archives of Neurology and Psychiatry. Chicago, 172.
 Archives d'Ophthalmologie, 437.
 Archives of Ophthalmology, 438.
 Archives de la Société des Sciences Médicales et Biologiques de Montpellier, 439.
 Archivio Italiano di Chirurgia, 268, 440.
 Archivio Italiano di Scienze Mediche Coloniali e di Parassitologia, 10, 81, 269.
 Archivio Ostetricia e Ginecologia, 441.
 Archivos do Instituto Biologico, 442.
 Archivos de Medicina Infantil, 443.
 Archivos de Medicina Interna, 444.
 Archivos de Pediatría del Uruguay, 445.
 Archivos Uruguayos de Medicina, Cirugía y Especialidades, 270, 446.
 Arquivos do Instituto Penido Burnier, 447.
 Atti del Reale Istituto Veneto di Scienze, Lettere ed Arti, 448.
 Australian Journal of Experimental Biology and Medical Science, 449.
 Australian and New Zealand Journal of Surgery, 450.
 Australian Veterinary Journal, 82, 173, 451.

INDEX OF PERIODICALS.

- Beiträge zur Klinischen Chirurgie, 452.
 Beiträge zur Pathologischen Anatomie und zur Allgemeinen Pathologie, 271.
 Bergcultures, 272.
 Berliner und Münchener Tierärztliche Wochenschrift, 83, 174, 273.
 Biochimica e Terapia Sperimentale, 11.
 Biological Bulletin, 274, 453.
 Biologisch Jaarboek, 454.
 Boletín de la Academia Nacional de Medicina de Buenos Aires, 456.
 Boletín del Instituto de Clínica Quirúrgica, 275.
 Boletín del Ministerio de Sanidad y Asistencia Social, 276.
 Boletín de la Sociedad Cubana de Pediatría, 457.
 Boletines y Trabajos de la Sociedad de Cirugía de Buenos Aires, 277, 458.
 Botany and Zoology, 459.
 Brain, 460.
 Brasil-Medico, 12, 461.
 Bratislavské Lekárske Listy, 462.
 British Journal of Surgery, 278.
 British Medical Journal, 13, 84, 279.
 Buletinul Muzeului Național de Istorie Naturală din Chișinău, 463.
 Bulletin de l'Académie de Médecine de Roumanie, 280, 464.
 Bulletin de l'Académie des Sciences de de l'URSS. Classe des Sciences. Mathématiques et Naturelles. Série Biologique, 465.
 Bulletin de l'Académie Vétérinaire de France, 175, 466.
 Bulletin. Animal Health Station, Yeerongpilly, Queensland, 467.
 Bulletin de Biologie et de Médecine Expérimentale de l'URSS, 468.
 Bulletin. California Agricultural Experiment Station, 176.
 Bulletin. Department of Health, Puerto Rico, 469.
 Bulletin de l'Institut Océanographique de Monaco, 281, 470.
 Bulletin International de l'Académie Polonaise des Sciences et des Lettres. Classe des Sciences Mathématiques et Naturelles. Série B: Sciences Naturelles, 471.
 Bulletin et Mémoires de la Société Médicale des Hôpitaux de Paris, 85.
 Bulletins et Mémoires de la Société de Radiologie Médicale de France, 282, 472.
 Bulletin Mensuel de l'Office International d'Hygiène Publique, 86.
 Bulletin Mensuel. Société de Médecine Militaire Française, 473.
 Bulletin. Ministry of Agriculture and Fisheries. London, 14.
 Bulletin du Musée Royal d'Histoire Naturelle de Belgique, 283.
 Bulletin de l'Office International des Epizooties, 474.
 Bulletin de la Société Belge d'Ophtalmologie, 475.
 Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord, 476.
 Bulletin de la Société d'Histoire Naturelle des Ardennes, 477.
 Bulletin de la Société Médico-Chirurgicale de l'Indochine, 177, 284.
 Bulletin de la Société Nationale d'Acclimatation de France, 478.
 Bulletin de la Société Neuchâteloise des Sciences Naturelles, 479.
 Bulletin de la Société de Pathologie Exotique, 15, 87, 178, 285, 480.
 Bulletin de la Société Vaudoise des Sciences Naturelles, 481.
 Bulletin. University of Florida Agricultural Experiment Station, 179.
 Campo. Agricultura, Industria, Comercio. Rio de Janeiro, 482.
 Canadian Journal of Comparative Medicine, 286.
 Canadian Journal of Research. Section C. Botanical Sciences, 88.
 Canadian Journal of Research. Section D. Zoological Sciences, 16, 89, 180, 287.
 Canadian Medical Association Journal, 288.
 Canadian Mining Journal, 181.
 Časopis Lékařův Českých, 483.
 Cervello. Giornale di Neurologia, 484.
 Ceylon Journal of Science. Section B. Zoology and Geology. (Solia Zeylanica), 485.
 Ceylon Journal of Science. Section D. Medical Science, 289.
 Chinese Medical Journal, 17, 90, 290.
 Chirurg, 486.
 Circular. Hawaii Agricultural Experiment Station, 182.
 Circular. Illinois Agricultural Experiment Station, 183.
 Clinica Veterinaria, 291, 487.
 Clujul Medical, 292.
 Comptes Rendus de l'Association des Anatomistes, 488.
 Comptes Rendus Mensuels des Séances de la Classe des Sciences Mathématiques et Naturelles. Académie Polonaise des Sciences et des Lettres, 489.
 Comptes Rendus des Séances de l'Académie des Sciences, 18, 91, 293.
 Comptes Rendus des Séances de la Société de Biologie, 19, 92, 294, 490.

INDEX OF PERIODICALS.

Cornell Veterinarian, 184, 295, 491.
Cyprus Agricultural Journal, 492.
Cytologia, 493.

Deutsche Jäger (Der), 20.
Deutsche Jägerzeitung, 494.
Deutsche Landwirtschaftliche Geflügel-
zeitung, 495.
Deutsche Landwirtschaftliche Presse,
496.
Deutsche Pelztierzüchter (Der), 497.
Deutsche Tierärztliche Wochenschrift,
21, 93, 297, 498.
Deutsche Zeitschrift für Chirurgie, 499.
Deutsche Zeitschrift für die Gesamte
Gerichtliche Medizin, 298.
Deutsches Tierärzteblatt, 296.
Día Médico, 500.
Duodecim, 501.

Ecological Monographs, 299.
Edinburgh Medical Journal, 185.
Empire Journal of Experimental Agri-
culture, 22.
Entomologist's Record, 300.

Farmers' Bulletin. U.S. Department
of Agriculture, 502.
Farmers Weekly, 94, 301.
Farming in South Africa, 23, 95, 186,
302.
Field, 96.
Fischerei-Zeitung, 503.
Folha Medica, 504.
Folia Clinica et Biologica, 505.
Fortschritte auf dem Gebiete der
Röntgenstrahlen, 506.
Fragmenta Faunistica Musei Zoologici
Polonici, 507.
Fukuoka-Ikwadaigaku-Zasshi, 187, 508.

Gaceta Medica de Caracas, 509.
Gazette Médicale de France, 510.
Gazzetta Internazionale di Medicina e
Chirurgia, 511.
Gazzetta degli Ospedali e delle Cliniche,
303, 512.
Geneeskundig Tijdschrift voor Neder-
landsch-Indië, 24, 97, 188, 304.
Giornale di Clinica Medica, 513.
Giornale Italiano di Clinica Tropicale,
305, 514.
Giornale di Medicina Militare, 306.
Giornale di Psichiatria e di Neuropato-
logia, 515.
Göteborgs Kungl. Vetenskaps- och
Vitterhetssamhälles Handlingar.
Ser. B., 516.

Haematologica, 98, 517.
Harefuah, 518.
Higiena Produktów Zwierzęcych, 519.
Hihu-to-Hitunyo, 520.

Hospital. Rio de Janeiro, 307, 521.
Hygeia. Chicago. 308.

Illinois Biological Monographs, 99.
Imperial Bureau of Agricultural Para-
sitology (Helminthology). Pub-
lications, 100.
Indian Journal of Medical Research,
101, 189, 309.
Indian Journal of Veterinary Science
and Animal Husbandry, 190, 310.
Indian Medical Gazette, 25, 102, 191,
311.
Indian Veterinary Journal, 103, 192.

Japanese Journal of Zoology, 312.
Journal of Agricultural Research, 313,
522.
Journal of the American Medical
Association, 26, 104, 193.
Journal of the American Pharmaceutical
Association, 194.
Journal of the American Veterinary
Medical Association, 27, 105.
Journal of Animal Ecology, 106.
Journal of the Bath and West and
Southern Counties Society, 107.
Journal of the British Goat Society, 108.
Journal of the Chemical Society.
London, 109.
Journal de Chirurgie. Paris, 110, 314,
523.
Journal of Comparative Pathology and
Therapeutics, 524.
Journal of the Council for Scientific and
Industrial Research, Australia, 195,
315.
Journal of the Department of 'Agricul-
ture. South Australia, 525.
Journal of the Egyptian Medical
Association, 28, 316.
Journal of the Elisha Mitchell Scientific
Society, 526.
Journal of the Florida Medical Associa-
tion, 317.
Journal of Helminthology, 29, 111, 196,
318.
Journal of the Indiana State Medical
Association, 527.
Journal of the Japanese Society of
Veterinary Science, 528.
Journal of Laboratory and Clinical
Medicine, 30, 319.
Journal de Médecine de Lyon, 320.
Journal de Médecine de Paris, 197.
Journal of the Ministry of Agriculture.
London, 112.
Journal of Oriental Medicine, 31, 113,
198, 321.
Journal of Parasitology, 32, 114, 199,
322.
Journal of Pathology and Bacteriology,
33.
Journal of Pediatrics, 323.

INDEX OF PERIODICALS.

- Journal of the Philippine Islands Medical Association, 34, 324, 529.
 Journal of the Public Health Association of Japan, 325, 530.
 Journal de Radiologie et d'Électrologie, 531.
 Journal of the Royal Army Veterinary Corps, 532.
 Journal of the Royal Horticultural Society, 200.
 Journal of the Royal Sanitary Institute, 533.
 Journal of Science of the Hiroshima University. Series B, Division I. Zoology, 534.
 Journal of the Society of Tropical Agriculture, Formosa, 535.
 Journal of the South African Veterinary Medical Association, 35, 536.
 Journal of Tropical Medicine and Hygiene, 36, 115, 201, 326, 537.
 Journal d'Urologie Médicale et Chirurgicale, 538.
 Journal of Urology, 539.
 Journal of the Washington Academy of Sciences, 37, 116, 540.
 Journal of Wildlife Management, 541.
 Jugoslovenski Veterinarski Glasnik, 542.
 Khirurgiya, 543.
 Klinicheskaya Meditsina, 544.
 Klinische Wochenschrift, 327.
 Közlemények az Összehasonlító Élet- és Kórtan Köréből, 545.
 Lancet, 117, 202.
 Land und Frau, 546.
 Liège Médical, 328.
 Lingnan Science Journal, 38, 203, 547.
 Lyon Médical, 548.
 Marseille Médical, 549.
 Meddelelser fra Statens Forsøgsvirksomhed i Plantekultur, Kjøbenhavn, 329.
 Medical Annals of the District of Columbia, 550.
 Medical Journal of Australia, 39, 118, 204, 551.
 Medical Log, 40.
 Medical Parasitology and Parasitic Diseases, 119, 205, 552.
 Medical Press and Circular, 553.
 Medical Record, 554.
 Medicina México, 330, 555.
 Medicina de Hoy, 206, 331, 556.
 Medicina del Lavoro, 332.
 Medycyna, 557.
 Mémoires de l'Académie de Chirurgie, 558.
 Mémoires de l'Académie Polonaise des Sciences et des Lettres. Classe des Sciences Mathématiques et Naturelles. Série B. Sciences Naturelles, 559.
 Mémoires de l'Institut d'Égypte, 560.
 Mémoires de l'Institut Royal Colonial Belge, 561.
 Mémoires du Musée Royal d'Histoire Naturelle de Belgique, 333.
 Memorias do Instituto Butantan, 562.
 Memorias do Instituto Oswaldo Cruz, 207, 334, 563.
 Mikrokosmos, 564.
 Military Surgeon, 120.
 Minerva Medica. Torino, 335, 565.
 Mississippi Doctor, 566.
 Monatsschrift für Psychiatrie und Neurologie, 567.
 Monographias do Instituto Oswaldo Cruz, 568.
 Monthly Bulletin of the Bureau of Health, Manila, 569.
 Montpellier Médical, 570.
 Münchener Tierärztliche Wochenschrift, 41, 336.
 Mycologia, 571.
 Nagasaki Igakkwai Zassi, 572.
 Natur und Volk, 573.
 Nature. London, 42, 337, 574.
 Nautilus, 575.
 Nederlandsch-Indische Bladen voor Diergeneeskunde en Dierenteelt, 338, 576.
 Nervenarzt, 577.
 New England Journal of Medicine, 43, 121.
 New Zealand Journal of Agriculture, 339, 578.
 New Zealand Journal of Science and Technology, 208.
 New Zealand Medical Journal, 209, 579.
 Nordisk Medicinsk Tidsskrift, 580.
 Norsk Veterinær-Tidsskrift, 122.
 North American Veterinarian, 123, 210, 581.
 North Western Naturalist, 582.
 Novy Khirurgicheskiy Arkhiv, 583.
 Nuova Veterinaria, 44.
 Okayama-Igakkai-Zasshi, 124, 211.
 Onderstepoort Journal of Veterinary Science and Animal Industry, 340, 585.
 Osservatore Medica, 586.
 Oto-Rhino-Laryngologia, 587.
 Pamiętnik Państwowego Instytutu Naukowego Gospodarstwa Wiejskiego w Puławach. Wydział Weterynaryjny, 588.
 Parasitology, 45, 125, 212, 341.
 Paris Médical, 589.
 Pediatria, 590.
 Peking Natural History Bulletin, 213, 591.

INDEX OF PERIODICALS.

Phare Médical, 342.
 Pharmazeutische Zeitung, 592.
 Philippine Journal of Animal Industry, 593.
 Philippine Journal of Science, 343, 594.
 Phytopathology, 126, 214.
 Plant Disease Reporter, 46, 215, 595.
 Plant Disease Reporter. Supplement, 216.
 Policlinico (Sezione Chirurgica), 344, 596.
 Policlinico (Sezione Pratica), 127, 345, 597.
 Polska Gazeta Lekarska, 598.
 Poultry Science, 346.
 Prensa Médica Argentina, 128, 34/, 599.
 Presse Médicale, 348, 600.
 Problemy Tuberkuleza, 601.
 Proceedings of the Annual Meeting of the Medical Section of the American Life Convention, 602.
 Proceedings of the Helminthological Society of Washington, 47, 217.
 Proceedings of the Indian Academy of Sciences. Section B, 603.
 Proceedings of the Indian Science Congress, 604.
 Proceedings of the Linnean Society of New South Wales, 605.
 Proceedings of the National Academy of Sciences, India, 349, 606.
 Proceedings of the Royal Society of Medicine, 48, 218, 350.
 Proceedings of the Royal Society of Victoria, 607.
 Proceedings of the Society for Experimental Biology and Medicine, 129, 219, 351.
 Proceedings of the Somersetshire Archaeological and Natural History Society, 608.
 Proceedings of the Staff Meetings of the Mayo Clinic, 609.
 Proceedings of the United States National Museum, 130.
 Proceedings of the Zoological Society of London, 220.
 Proceedings of the Zoological Society of London. Series B. Systematic and Morphological, 221, 352.
 Progrès Agricole et Viticole, 610.
 Protoplasma, 611.
 Przegląd Weterynaryjny, 612.
 Psychiatrisch-Neurologische Wochenschrift, 613.
 Public Health Reports. Washington, 131, 222, 353.
 Publications. Faculty of Medicine, Egyptian University, 354.
 Puerto Rico Journal of Public Health and Tropical Medicine, 49, 223, 614.

Queensland Agricultural Journal, 50, 355.

Radiologia Medica, 615.
 Rassegna Medica, 616.
 Rassegna della Previdenza Sociale, 617.
 Records of the Indian Museum, 356, 618.
 Recueil de Médecine Vétérinaire, 619.
 Reunión de la Sociedad Argentina de Patología Regional, 224.
 Revista de Agricultura, 225.
 Revista de la Asociación Médica Argentina, 620.
 Revista da Associação Paulista de Medicina, 621.
 Revista de Biologia e Hygiene, 357, 622.
 Revista Brasileira de Medicina e Pharmacia, 623.
 Revista Brasileira de Tuberculose, 624.
 Revista Chilena de Higiene y Medicina Preventiva, 625.
 Revista de Chirurgie si Bulletins et Mémoires de la Société de Chirurgie de Bucarest, 626.
 Revista de Gastro-Enterología de México, 358, 627.
 Revista Médica Cubana, 359, 628.
 Revista Médica de Yucatán, 360.
 Revista de Medicina Tropical y Parasitología, Bacteriología, Clínica y Laboratorio, 133, 226, 629.
 Revista de Medicina Veterinaria. Buenos Aires, 630.
 Revista de Pediatrie și Puericultură, 631.
 Revista Sanitară Militară. București, 632.
 Revista de Tuberculosis del Uruguay, 633.
 Revue Générale de Clinique et de Thérapeutique. Journal des Praticiens, 634.
 Revue de Médecine et d'Hygiène Tropicales, 132, 635.
 Revue de Médecine Vétérinaire, 636.
 Revue Médicale du Centre-Ouest, 637.
 Revue Médicale de Nancy, 638.
 Revue d'Oto - Neuro - Ophtalmologie, 639.
 Revue de Pathologie Comparée et d'Hygiène Générale, 640.
 Revue du Service de Santé Militaire, 641.
 Revue Suisse de Zoologie, 51, 361, 642.
 Revue Vétérinaire Militaire, 643.
 Revue de Zoologie et de Botanique Africaines, 52, 644.
 Rhode Island Medical Journal, 645.
 Rhodesia Agricultural Journal, 646.
 Riforma Medica, 134, 362.
 Rinascenza Medica, 363.

INDEX OF PERIODICALS.

- Rivista di Parassitologia, 135, 227, 364.
 Rivista di Parassitologia. Suplemento Monografico, 365.
 Roentgen-Praxis, 647.
 Rundschau auf dem Gebiete der Gesamten Fleischbeschau und Trichinenschau des Schlacht- und Viehhofwesens, 366.
- Schweizer Archiv für Tierheilkunde, 367, 648.
 Schweizerische Medizinische Wochenschrift, 53, 136, 228.
 Science, 54, 137, 229, 368.
 Scientific Monthly. New York, 649.
 Scientific Reports of the Australasian Antarctic Expedition, 1911-14. Series C. Zoology and Botany, 650.
 Scottish Journal of Agriculture, 230, 369.
 Sei-i-Kwai Medical Journal, 651.
 Semana Médica, 55, 370.
 Sitzungsberichte der Gesellschaft zur Beförderung der Gesamten Naturwissenschaft zu Marburg, 652.
 Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin, 231, 371.
 Skandinavisk Veterinär-Tidskrift, 653.
 South African Medical Journal, 56, 372, 654.
 Southern Medical Journal, 138, 373.
 Sovetskiy Vrachebniy Zhurnal, 374, 655.
 Sowjetskaja Veterinarija, 375.
 Spisy Vysoké Školy Zvěrolékařské, Brno, 656.
 Stain Technology, 657.
 Surgery, 658.
 Svenska Lärartidningen, 659.
- Taiwan Igakkai Zasshi, 57, 139, 232, 376, 660.
 Technical Bulletin. United States Department of Agriculture, 233.
 Technical Bulletin. University of Minnesota Agricultural Experiment Station, 661.
 Therapie der Gegenwart, 662.
 Tidsskrift for Planteavl, 234, 377.
 Tierärztliche Rundschau, 58, 140, 235.
 Tijdschrift voor Diergeneeskunde, 59, 141, 236.
 Tijdschrift over Plantenziekten, 142.
 Transactiones Societatis Pathologicae Japonicae, 663.
 Transactions of the American Microscopical Society, 60, 143, 237, 378.
 Transactions of the Hawaii Territorial Medical Association, 664.
- Transactions of the Natural History Society of Formosa, 379.
 Transactions of the Royal Society of Canada, 665.
 Transactions of the Royal Society of Tropical Medicine and Hygiene, 61, 144, 238, 380.
 Travaux de l'Institut Zoologique de l'Académie des Sciences de l'URSS, 381.
 Tropical Agriculture, 62, 239.
 Tropical Diseases Bulletin, 63.
 Trudi Soveta po Izucheniyu Proizvoditelnykh Sil, Seriya Turkmenskaya, 666.
 Tunisie Médicale, 382, 667.
- United States Naval Medical Bulletin, 383.
 University of California Publications in Zoology, 384.
 Urologic and Cutaneous Review, 145, 385.
- Vestnik Khirurgii, 386, 668.
 Vestnik Oftalmologii, 669.
 Veterinarija ir Zootehnika, 670.
 Veterinarski Arhiv, 387, 671.
 Veterinary Journal, 64, 146, 672.
 Veterinary Medicine, 388, 673.
 Veterinary Record, 65, 147, 240, 389, 674.
 Videnskabelige Meddelelser fra den Naturhistoriske Forening i Kjøbenhavn, 66.
 Virginia Medical Monthly, 390, 675.
 Vlaamsch Diergeneeskundig Tijdschrift, 676.
 Vrachebnoe Delo, 391, 677.
- Wiadości Weterynaryjnych, 678.
 Wiener Archiv für Innere Medizin, 679.
 Wiener Klinische Wochenschrift, 241.
 Wiener Tierärztliche Monatsschrift, 680.
- Zeitschrift für Fleisch- und Milchhygiene, 67, 148, 242, 392.
 Zeitschrift für Hygiene und Infektionskrankheiten, 68.
 Zeitschrift für Infektionskrankheiten, Parasitäre Krankheiten und Hygiene der Haustiere, 149, 243, 681.
 Zeitschrift für Kinderheilkunde, 682.
 Zeitschrift für Parasitenkunde, 69, 150, 244, 393.

INDEX OF PERIODICALS.

Zeitschrift für Pflanzenkrankheiten
(Pflanzenpathologie) und Pflanzenschutz, 394, 683.
Zeitschrift für Urologie, 395.
Zeitschrift für Vergleichende Physiologie, 684.
Zentralblatt für Bakteriologie. Abteilung 1, Originale, 70, 151, 396.
Zentralblatt für Chirurgie, 245, 685.
Zentralblatt für Gynäkologie, 686.

Zoologica. New York, 687.
Zoologica Poloniae, 688.
Zoologische Jahrbücher. Abteilung für Anatomie und Ontogenie der Tiere, 397.
Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere, 398.
Zoologischer Anzeiger, 152, 246, 689.
Zoologiska Bidrag från Uppsala, 690.

INDEX OF SUBJECTS.

(The reference is to the serial numbers : numbers in bold type indicate abstracts.)

- Abyssinia, filariasis 266a.
 —, Schistosomiasis mansoni 227a.
Acanthobothrium heterodonti n. sp. in *Heterodontus philippi* 607a.
Acanthocephala from Antarctic 650b.
 —, life-history 732em.
 — spp. in *Lota vulgaris* 237e.
Acanthocephalus elongatus n. sp. in *Bufo formosus* 212c.
 — *sinensis* n. sp. in Amphibia 212c.
Acanthocolpidae in fishes 604b.
Acanthocotyle squatinæ to *Trochopus* 47i.
Acanthocybium petus, *Hirudinella* n. sp. in 237d.
 — *solandri*, trematodes in 322j.
Accacladium nematulum n. sp. in *Mola mola* 60a.
Acerina cernia, trematode disease in 503c.
Acrobelinae n. subf. 47a.
Actinocleidus triangularis n. sp. in *Lepomis symmetricus* 199 l.
Actinolaimus chitwoodi n. sp. 217j.
Acuaria (*Echinuria*) *decorata* in *Podiceps ruficollis* 261d.
Aedes spp., intermediaries for *Dirofilaria immitis* 87d, 87g, 92b.
Aelurostrongylus abstrusus, life-history 732bl.
 Afghanistan, nematodes 603i.
 Africa, schistosome intermediaries 23c.
Agamodistomum martiranoi redescribed 135d.
 — *neurogangliorum* n. sp. in *Anopheles maculipennis* 135d.
Agouti paca, *Heligmoskrjabinia* n. g., n. sp. in 417a.
Alaria (?) metacercaria in *Xenopus laevis* 170b.
Alassostoma to *Chiorchis* 170a.
Alces alces, helminths in 393a.
 —, *Parafasciolopsis fasciolaemorpha* in 21c.
Alcicornis baylisi n. sp. 354a.
Allantonema musca n. sp. in *Musca vicina* 263c.
 — *stricklandi* n. sp. in *Musca vicina* 263d.
Allintoshius nycticeius n. g., n. sp. in *Nycticeius humeralis* 47e.
Allocreadiidae, cercariae 32h.
Allocreadium angusticolle, life-history 293a.
 — *handiai* n. sp. in *Ophicephalus punctatus* 261a.
 — *pseudotritoni* n. sp. 32b.
Alloglossidium to *Plagiorchiniæ* 237a.
 — *corti*, life-history 199e.
Ambystoma opacum, *Diplostomulum* n. sp. in 60b.
Amia calva, 2nd intermediary for *Apophallus venustus* 287b.
Amidostomum anseris in *Mareca americana* 105d.
 — — — waterfowl 105d.
 — *boschadis* n. sp. in *Anas platyrhynchos* 732ba.
Amphacanthus oramin, *Diplosetis* n. g., n. sp. in 594b.
 Amphibia, *Acanthocephalus* n. sp. in 212c.
 —, *Asymphyllodora tincae* in 92d.
 —, intermediaries for *Multicaecum tenuicolle* 114o.
 —, — — *Ophidascaris labiatopapillosa* 114o.
Amphisbaena alba, *Pneumotrema* n. g., n. sp. in 352c.
 Amphistomes reclassified 170a.
Amphiura tridactylum, trematodes in 47d.
Amyda japonica, *Astiotrema* n. sp. in 158.
 — —, *Kaurma* n. sp. in 312c.
 Anaemia, *Diphyllobothrium* 580a.
 —, hookworm 30b, 101a, 117a, 162a, 198c, 224j, 253a, 309a, 500a, 514a, 517a, 620a.
 —, *Hymenolepis nana* 139d.
 —, *Schistosomiasis mansoni* 224d.
Anas circia, *Diorchis* n. sp. in 732el.
 — *domestica*, *Echinostoma* n. sp. in 591d.
 — —, *Notocotylus* n. sp. in 591e.
 — *platyrhynchos*, *Amidostomum* n. sp. in 732 ba.
Ancylo-discoides n. g. 159.
 — *asoti* n. sp. 159.
 — *parasituri* n. sp. 159.
Ancylostoma, see also Hookworm.
 — *braziliense*, erratic, in man 24a.
 — —, submucosal in man 164a.
 — *caninum*, blood absorption 198e.
 — —, cat & dog strains 32g.
 — — in dog, acquired immunity 322j.
 — *duodenale*, experimental infection 198b.
 — — in man in Greece 716.
Ancylostomiasis 345a, 555a.
 —, control 469a.
 — in dog, haematology 1g.
 — — Hawaii 664b.
 — — man 269a, 480d, 521b, 566a, 590a, 617a.
 — — —, anthelmintics 72a.
 — — — in Argentina 55b.
 — — — Brazil 418a, 418b, 419a, 504b.
 — — —, control 181a.
 — — —, diagnosis 81a.
 — — — in Egypt 254b, 254c.
 — — —, "Entelmintina" 423c, 423d.
 — — — in France 86b.
 — — —, haematology 732et.
 — — — in India 399.
 — — — — Italy 168a, 269b.
 — — — — Libya 269f.

INDEX OF SUBJECTS.

- Ancylostomiasis in man, prognosis** 602a.
 — in Russia, control 205a.
 —, tetrachlorethylene 505a.
 —, treatment 305a.
 — in Tunis 86c.
 — — U.S.A. 86a, 254a.
 — & pregnancy 407; 441a.
 — in Russia, control 732df.
 — duodenale & haematology 55c.
Ancyrocephalus lethrinus n. sp. 159.
 — *similis* n. sp. 37b.
 — *thysanophrydis* n. sp. 159.
Angiodictyidae, genera differentiated 732bd.
Angola, nematodes 70c.
Anguilla anguilla, *Deropristis inflata* in 92d.
Anguillulina aptini in *Aptinotrips rufus*, ecology 106b.
 — *dipsaci* in bulbous iris, pathology 88b.
 —, cross-infection experiments 595a.
 — disease in *Ipomoea batatas* 126c.
 — — — parsnip 107b.
 — — — sugar-beet 318g.
 — — — *Vicia Faba* 112a.
 — — — wheat, varietal immunity 318c.
 —, feeding methods 217b.
 — in Germany, new hosts 426a.
 — — narcissus, control 14a.
 —, new hosts 318d.
 — in primulas 318e.
 —, technique for infecting plants with 88a.
 — in tulip 217c.
 — *tobaensis* n. var. in aquatic plants 7a.
 — *mahogani* redescribed 196a.
 — *multicincta* in *Scorzonera tau-saghyz* 732ef.
 — *pratensis* in coffee in Dutch East Indies 272a.
Anguina spermophaga n. sp. in *Saccharum spontaneum* 47o.
Angusticaecum braziliense n. sp. in *Caiman niger* 333a.
Animal husbandry, sheep helminths 315a.
Animals, *Cysticercus bovis* in 392a.
 —, domestic, cestode larvae in 366a.
 —, —, helminthiasis in 93a, 105a, 148c, 156, 336a, 389a.
 —, —, helminths in 82a, 225a, 248, 296a, 593a, 649a, 673a, 732da, 732cw.
 —, —, lungworm disease in 252a.
 —, —, nematodes in 190a.
 —, —, Platyhelminia in 192a.
 —, —, strongyles in 180a.
 —, —, *Strongyloides* in 732cl.
 —, —, strongyloidiasis in 732y.
 —, fur-bearing, helminthiasis in 502a.
 —, —, Trichinella in 497a.
 —, helminths in 17a, 64a.
Animals, laboratory, trichinelliasis in 694.
 —, *Thelazia* spp. in 384a.
 —, Trichinella in 322j.
 —, wild, helminthiasis in 494a.
 —, —, helminths in 231a, 541a, 681a.
 —, —, lungworms in 400.
 —, —, nematodes in 481a.
 —, zoo, helminths in 297c, 334e, 466a, 487b.
Anobium paniceum, intermediary for *Hymenolepis diminuta* 294a.
Anomotaenia macropterygis n. sp. in *Macropteryx longipennis* 642a.
Anopheles spp., intermediaries for *Wuchereria bancrofti* 61a, 97e.
 — *barbirostris*, intermediary for *Microfilaria malayi* 188b.
 — *maculipennis*, *Agamodistomum* n. sp. in 135d.
Anoplocephala genettae n. sp. in *Genetta rubiginosa* 585d.
Anoplocephalinae, life-history 322j.
Antarctic, Acanthocephala 650b.
 —, cestodes 650c.
 —, nematodes 650d.
 —, trematodes 650a.
Anthelmintics against hookworm 72a.
 —, "Allegan" 174c.
 —, "Anthiomaline" 36d, 87a, 166a, 166b, 635b, 654a.
 —, antimony 269c, 269d.
 —, — compounds 45a.
 —, "Antimosan" 192d, 542b.
 —, Arecolin 732dh.
 —, arecoline hydrobromide 388a.
 —, benzene 490a.
 —, bluestone & nicotine sulphate 195b.
 —, carbon tetrachloride 129a, 322g, 732ek.
 —, chenopodium oil 59a, 331c, 389b, 389c, 592a.
 —, citrate of iron & ammonium 443a.
 —, copper compounds 4c.
 —, — sulphate 133a.
 —, — & lysol 732dw.
 —, Deodar oil 192c.
 —, "Dictyolin" 161a.
 —, diheptanol peroxide 194a.
 —, dyes 133f.
 —, "Entelmintina" 423c, 423d.
 —, flavones 603e.
 —, Fouadin 304f.
 —, gentian violet 139c.
 —, harmaline 434a.
 —, hexachlorethane 487d.
 —, hexylresorcinol 901, 210a.
 —, hydrogen peroxide 133b.
 —, ingested by *Ascaris* 162b.
 —, iodine solutions 732ce.
 —, iso-amyl-ortho-cresol 491d.
 —, "Lentin" 140c.
 —, mass treatment 76c.
 —, monobrom hydrocarbons 732es.

INDEX OF SUBJECTS.

Anthelmintics, nicotine sulphate 133a.
 —, novarsenobenzol 284a.
 —, *Omphalia lapidescens* 113a.
 —, oxonides 194a.
 —, "Paludex" 81c.
 —, phenol 490a.
 —, "Protokosin" 109a.
 —, pumpkin seeds 327a.
 —, pyrethrine 175a.
 —, quinine 202a.
 —, santonin 184a.
 —, "Sprehn's capsules" 732f.
 —, tetrachlorethylene 193b, 311b, 320a, 505a, 675a, 732f.
 —, thymol 490a, 548c.
 —, "Timbó" 461a.
 —, toxicity 501a.
 —, various, 3b, 4b, 26a, 27a, 265a, 325a, 635a, 639a.
Anthostrongylus okapiae n. sp. 644c.
 Antigua, Filariasis bancrofti 36e.
 —, helminths 239a.
Apatemon casarcus n. sp. in *Casarca ferruginea* 603f.
 — *indicus* n. sp. in *Casarca ferruginea* 603f.
Apharyngostrigea ardeolina n. sp. 606b.
 — *indiana* n. sp. 606b.
Aphelenchoides coffeae valid 217d.
 — (*Cryptaphelenchus*) n. subg. 398a.
 — — *amitini* n. sp. 398a.
 — — *malpighius* n. sp. 398a.
 — (*Ektaphelenchus*) n. subg. 398a.
 — *fragariae* in paeony 217d.
 — (*Parasitaphelenchus*) *papillatus* n. sp. 398a.
 — — *uncinatus* n. subg., n. sp. 398a.
 — *penardi* predaceous on *Rhabditis obtusa* 47c.
 — *ribes* disease in black currant 339a.
 — *ritzema-bosi* in tobacco 683a.
 — (*Steineria*) *viktoriae* n. subg., n. sp. 398a.
Aphelenchus tomici n. sp. in *Tomicus bidens* 66a.
Aphodius spp., *Diplogaster* n. spp. in 66a.
 — *distinctus*, intermediary for *Hymenolepis diminuta* 294a.
Aplectana congolense n. sp. in *Phrynobatrachus graneri* 249.
Apocreadium longisinosum n. sp. in fishes 404.
 — *mexicanum* n. g., n. sp. in fishes 404.
Aponurus n. spp. 604b.
Apophallus venustus, life-history 16b, 287b.
Aporidea n. ordo 701.
 Appendicitis, verminous 626b.
Aptinotrips rufus, *Anguillulina aptini* in 106b.
Archigetes to *Biacetabulum* 689a.

Arctocephalus forsteri, helminths in 605a.
 — *tasmanicus*, *Diphyllbothrium* n. sp. in 607a.
 Argentine, human ancylostomiasis 55b.
 —, — helminthiasis 224i, 416b.
 —, trichinelliasis 630a.
 Artefacts, vegetable, in faeces 41a, 401, 695, 721.
Artibeus jamaicensis, *Capillaria* n. sp. in 417b.
 Ascariasis & appendicitis in man 390b.
 — — aural disease 587a, 587b.
 — in buffalo, Deodar oil 192c.
 — — dog 58b.
 — — horse 367a.
 — — man 134a, 177a, 362c, 424a, 431b, 473b, 484a, 511b, 521a, 628a, 677a.
 — — —, diagnosis 631a.
 — — —, X-ray diagnosis 506a.
 — — pig 676a.
 — — —, control 732ei.
 — — —, tissue reactions 1f.
 Ascariasis leonina in felines 140a.
 Ascarid ova, irradiation & development 732w.
 — with 6 chromosomes in horse 229a.
 Ascaridia in pigeon, chemotherapy 732g.
 — spp. redescribed 133c.
 — *columbae*, experimental infections 89c.
 — — in pigeon, chenopodium oil 59a.
 — *galli*, experimental infections 89c.
 — — in fowl, control 50a, 467a.
 — — redescribed 256b.
 — *lineata* disease in birds 29g.
 — —, nutrition 732b.
 — — ova, viability 199c.
 — *perspicillum* in fowl's egg 10a.
 — *razia* n. sp. in *Colomba livia* 603i.
 — *serrata* redescribed 207d.
 Ascarids from Brazil 333a.
 —, physiology 684c.
 — in seals 45b.
 — & X-rays 557b.
 Ascaris, cytology 428a.
 — extracts, skin reactions 78a.
 — infection & bacteria 732dc.
 — larvae in eye of man 438a.
 — in man in China 90d, 90f, 90h.
 — — —, skin reaction 119a.
 — ova, cytology 274a.
 — —, technique for flotation 545a.
 — — ultra-centrifuged 42b.
 —, physiology 493a.
 —, respiration 684b.
 — *lumbricoides*, anthelmintics 162b.
 — — & *A. suum* serologically distinct 199a.
 — —, cytology 611a.
 — — in laboratory animals, pathology 732bh.
 — — — man 444a, 548a.
 — —, metabolism 114u.

INDEX OF SUBJECTS.

Ascaris lumbricoides, physiology 32e.
 — in U.S.A. rh.
 — *rectangula* to *Contraecum osculum* 45b.
 — *stenocephala* to *Contraecum osculum* 45b.
Aesellus aquaticus, 2nd intermediary for *Allocreadium angusticolle* 293a.
Aspiculuris schulzi n. sp. 207e.
Aspidodera revised 334b.
 — *anscripta* nom. nov. 334b.
 — *fasciata* to *A. anscripta* 334b.
 — *vazi* n. sp. in *Tatus novemcinctus* 334b.
Assimineae lutea, 1st intermediary for *Paragonimus* 3d.
Astiotrema orientale n. sp. in *Amyda japonica* 158.
Asymphyllodora tincae in *Scardinius erythrophthalmus*, life-history 92d.
Atelerix frontalis, *Physaloptera* n. sp. in 585a.
Atherina spp., *Bacciger bacciger* in 92d.
 — *mochon*, intermediary for *Dolichocentrum* n. sp. 91a.
Athesmia, key to spp. 47f.
 — *pricei* n. sp. in *Psophia viridis* 47f.
 — *wehri* n. sp. in *Pedioecetes phasianellus* 47f.
 Australasia, hydatidosis 209a.
 Australia, cestodes 607a.
 —, domestic animal helminths 82a.
 —, pig helminths 250a.
 —, trichinelliasis 118a.
 —, trichostrongylosis 525a.
 Avitaminosis & helminthiasis 423a.
 — lungworm disease in sheep 581a.
 — schistosomiasis 36d.
Axine chinensis n. sp. 159.
Azygia lucii vitellaria 732i.
Bacciger bacciger in *Atherina* spp. 92d.
 Bacteria & ascaris infection 732dc.
 — transmitted by *Rhabditis lambdiensis* 394a.
 Badger, *Filaroides falciformis* in 371a.
Balarites Maughamii controlling schistosome intermediaries 23c.
Barbus dobsoni, *Neocladorchis* n. g., n. sp. in 111e.
 Bats, *Prosthodendrium* n. spp. in 732ci.
 —, *Seuratium* n. sp. in 644a.
Bdellostoma hepaticum, *Tetanionema* n. g., n. sp. in 732ed.
 Beetles, bark, nematodes in 398a.
 Belgian Congo, human helminths 258a.
 —, nematodes 249.
 —, *Onchocerca volvulus* (?) 19c.
 —, *Schistosoma* spp. 19d, 111f.
 —, schistosome intermediaries 423b.
Belone strongylura, trematode in 604b.
Bertiella spp. in pigeon 604c.
Biacetabulum sieboldi n. comb. 689a.
Bibio spp., *Neoplectana* n. spp. in 66a.

Bilorchis indicum n. g., n. sp. 244a.
 Biography, Gustav Nachtigal 266b.
 Biology, animal nematodes 115.
 —, general 702.
 Bionomics, ascarid ova 732w.
 —, *Ascaridia lineata* ova 199c.
 —, *Capillaria columbae* ova 199i.
 —, cercariae 688b.
 —, cestode larvae 488a.
 —, cysticerci 242a.
 —, *Cysticercus bovis* 93b, 148b.
 —, *Dicrocoelium dendriticum* 211a.
 —, *Dictyocaulus* larvae 732cu.
 —, *Diphyllbothrium latum* 732cj.
 —, *Dirofilaria immitis* 201b.
 —, *Eurytrema pancreaticum* 211a.
 —, *Habronema megastoma* 732dz.
 —, helminth ova 32o, 552h.
 —, *Heterodera mariomi* 111c, 179a.
 —, *schachtii* 111b.
 —, hookworms 198d.
 —, hydatid 579b, 732cr.
 —, *Hymenolepis diminuta* 139a.
 —, *Limnaea philippinensis* 593b.
 —, *truncatula* 381a, 542a.
 —, *Microfilaria bancrofti* 376a.
 —, *malayi* 732bz.
 —, *Moniezia expansa* 162c, 322j, 727, 732cq.
 —, *Necator americanus* 357a.
 —, *Nippostrongylus muris* ova 322h.
 —, plant nematodes 217f.
 —, *Reniferinae* 322j.
 —, *Rhabditis coarctata* 732cs.
 —, *Schistosoma* spp. 167c.
 —, sheep helminths 180b.
 —, *Sparganum mansonioides* 322j.
 —, *Spirocerca lupi* 90b.
 —, strongyle larvae 297a, 403.
 —, *Strongyloides ratti* 47k, 162f, 162h, 322j.
 —, — larvae 1a.
 —, *Strongylus equinus* larvae 708.
 —, *Taenia saginata* 29f.
 —, — ova 204a.
 —, *taeniaeformis* 294b.
 —, *Trichinella* 1j, 149a, 167h, 219b.
 —, larvae 219a, 322j.
 —, *Trichostrongylus axei* 322j.
 —, *Trichuris trichiura* 732v.
 —, — ova 552g.
 —, *Vagrililaria columbigallinae* larvae 144c.
 —, *Wuchereria bancrofti* 144d, 326b, 380a.
 Birds, *Ascaridia lineata* disease in 29g.
 —, *Capillaria longicollis* disease in 29g.
 —, cestodes in 343a.
 —, helminthiasis in 502b.
 —, helminths in 413c.
 —, microfilariae in 699.
 —, strigeids in 606b.
 —, trematodes in 603b, 732eb.
 —, *Trichinella* in 167g.

INDEX OF SUBJECTS.

- Bison, *Dictyocaulus viviparus* in 371c.
Bithymia tentaculata, intermediary for
Sphaeriodiotrema globulus 244c.
—, 1st intermediary for *Asymphy-
lodora tincae* 92d.
—, ——— *Metorchis* n. sp. 69c.
Bitis arietans, *Spiroxy* n. sp. in 249.
"Blackhead" & *Heterakis* in fowl 173d.
— in poultry 240a.
— transmitted by *Heterakis papillosa*
528b.
Blattella germanica, intermediary for
Physaloptera turgida 732d.
Blattidae, helminths in 732ea.
Boa constrictor, *Porocephalus clavatus*
in 69a.
Boops salpa, *Mesometra orbicularis* in
135b.
Boselaphus tragocamelus, *Gaigeria pachy-
scelis* in 340a.
Bothriocephalus musculosus n. sp. in
Cichlosoma biocellata 478a.
— *rarus*, life-history 114b.
— n. sp. in *Triturus viridescens* 114a.
Bothrioscolex n. spp. in *Carassius caras-
sius* 393c.
— *dubius* n. sp. 393c.
— *japonensis* n. g., t. sp. 393c.
— *prussicus* n. sp. 393c.
— *rossittensis* n. sp. 393c.
Brachycoelium, key to spp. 130a.
— *dorsale* n. sp. 130a.
— *georgianum* n. sp. 130a.
— *hospitale* in *Ophisaurus ventralis* 217s.
— *louisianae* n. sp. 130a.
— *mesorchium* n. sp. 130a.
— *ovale* n. sp. 130a.
Brachylaemus suis in pig, life-history
18a, 80a.
— — —, pathology 466b.
Branchiostegus japonicus, trematodes in
157.
Brazil, ascarids 333a.
—, *Dirofilaria repens* 334d.
—, domestic animal helminths 732da.
—, human ancylostomiasis 418a, 418b,
419a, 504b.
—, — helminthiasis 504a.
—, — helminths 132a.
Breintia brevicaudata n. sp. in *Iguana*
tuberculata 74b.
— — to *Oswaldofilaria* 334c.
Britain, *Capillaria hepatica* 106a.
—, *Heterodera schachtii* 251a.
—, metastrongyles 369a.
—, *Onchocerca gutturosa* 125a.
—, *Paramphistomum cervi* 240c.
—, sheep helminthiasis 107a.
—, sheep helminths 717.
—, trichinellosis 279a, 279b.
British Guiana, sheep nematodes 62a.
Bubulcus ibis, *Gigantobilharzia* n. sp.
in 603j.
— —, *Neodiplostomum* n. sp. in 594a.
Bucephalidae in fishes in Red Sea 354a.
Bucephalopsis, key to spp. 111e.
— *karvei* n. sp. 111e.
— *lenti* n. sp. 354a.
— *longicirrus* n. sp. 354a.
— *megacetabulus* n. sp. 354a.
— *southwelli* n. sp. 354a.
Buffalo, ascariasis in 192c.
—, *Cooperia* n. sp. in 203b.
—, helminths in 547a.
—, nematodes in 203b.
—, *Onchocerca* n. sp. in 167f.
—, *Setaria* n. sp. in 203b.
Bufo formosus, *Acanthocephalus* n. sp.
in 212c.
Burma, domestic animal nematodes
190a.
—, — *Platyhelminia* 192a.
Bursaphelenchus pimiperdae n. g., n. sp.
398a.
— *poligraphi* n. sp. 398a.
Buteo sp., *Physaloptera* n. sp. in 133c.
— *rufinus*, *Aiplostomum* n. sp. in 349a.
Caballonema longicapsulatum n. g., n. sp.
in horse 732a.
Caiman niger, *Angusticaecum* n. sp. in
333a.
—, *Multicaecum* n. sp. in 333a.
Callichrous pabda, *Pleurogenes* n. sp. in
606a.
Camallanus kaapstaadi n. sp. in *Xenopus*
laevis 170b.
— *sweeti* n. sp. in *Ophiocephalus gachua*
114p.
Cambarus sp., 2nd intermediary for
Crepidostomum cornutum 114e,
143b.
Camel, *Chabertia* n. sp. in 603c.
Canada, *Diphyllbothrium* spp. 322g.
—, — *latum* 287a, 322g.
—, human helminths 40a.
—, pigeon helminths 89b.
Cancer & *Cysticercus longicollis* in rat
151a.
Cancroma cochlearia, *Contracecum* n. sp.
in 333a.
Canis latrans, *Physaloptera felidis* in
295b.
Capillaria spp. from Cuba 417b.
— *bovis* in cattle in Japan 528c.
— *columbae*, life-history 322j.
— — ova, viability 199i.
— *cubana* n. sp. in *Artibeus jamaicensis*
417b.
— *hepatica* in *Ondatra zibethica* in
Britain 106a.
— — — rat & mouse, immunity 322j.
— *intestinalis* n. sp. 259a.
— *longicollis* disease in birds 29g.
— *magalhãesi* n. sp. in *Micropogon*
undulatus 207j.
— *minuta* n. sp. in *Suncus coerulus* 203a.

INDEX OF SUBJECTS.

- Capillaria sunci* n. sp. in *Suncus coeruleus* 203a.
 — *viguerasi* n. sp. in *Otopterus waterhousei* 417b.
Caranx speciosus, *Metabronema* n. sp. in 594d.
Carassius carassius, *Bothrioscolex* n. spp. in 393c.
Cardiophilaria pavlovskyi n. g., n. sp. in *Oriolus oriolus* 666a.
 Carnivores, opisthorchiasis in 119e.
Caryophyllaeus fuhrmanni nom. nov. 393c.
 — *japonensis* to *Bothrioscolex* 393c.
Casarca ferruginea, *Apatemon* n. spp. in 603f.
 Casoni reaction 731.
 Cat, *Ancylostoma caninum* in 32g.
 —, *Diphyllobothrium* extracts in 732ds.
 —, — spp. in 137a.
 —, — *erinacei* in 576b.
 —, helminthiasis in 388c.
 —, helminths in 186a, 196c, 491a, 507a, 678b, 732di.
 —, nematode in 604b.
 —, *Paragonimus westermani* in 604b.
 —, *Rictularia cahirensis* in 604c.
 —, *Taenia taeniaeformis* in 678a.
 —, trichinellosis in 90c.
 Cattle, *Capillaria bovis* in 528c.
 —, *Cysticercus bovis* in 29e, 67a, 67b.
 —, *Dictyocaulus viviparus* in 240e.
 —, fascioliasis in 487d, 487e.
 —, helminthiasis in 491e.
 —, hydatidosis in 242b.
 —, *Moniezia expansa* in 47m.
 —, *Onchocerca gutturosa* in 125a.
 —, *Stephanofilaria* n. sp. in 318f.
 —, stephanofilariasis in 318f.
 —, trichostrongylosis in 672d.
 —, *Trichostrongylus axei* in 528a.
Caularchus meandricus, *Helicometrina* n. sp. in 237c.
Caulorchis skrjabini n. sp. 732e.
Caviella australis, nematodes in 207e.
Centrocercus urophasianus, *Railletina* (*Skrjabinia*) n. sp. in 237b.
 Cephalobidae revised 47a.
Cephalochlamys namaquensis in *Xenopus laevis* 170b.
Cephalogonimus minutum n. sp. 244a.
Cercaria burti icmuae n. var. in *Limnaea palustris* 135c.
 — *dohema* n. sp. in *Stagnicola emarginata* 114j.
 — *gigantocerca* n. sp. 244c.
 — *helvetica* XVII to *Sphaeriodiotrema globulus* 244c.
 — XXIV to *Echinostoma revolutum* 99a.
 — *incognita* n. sp. 244c.
 — *mesotryphla* to *Glypthelmins quieta* 368a.
 — *poconensis* to *Zygocoryle* 322j.
Cercaria purpurae, anatomy 221a.
 — *quissetensis* to *Himastha quissetensis* 732ee.
 — *tirremidis* n. sp. in *Limnaea palustris* 135c.
 — *trivolvus* to *Echinostoma revolutum* 99a.
 — *yogena* n. sp. in *Stagnicola emarginata* 114j.
 Cercariae, escape from snail hosts 688b.
 —, immunity 322g.
 — in snails in U.S.A. 322j.
 — — *Stagnicola emarginata* 322f.
Cercopithecus mictitans, *Coenurus* in 322d.
Cercorchis auridistomi n. sp. in *Farancia abacura* 212a.
 — *sirensis* n. sp. in *Siren lacertina* 130b.
 Cestode disease & dermatitis in man 544b.
 — in fishes 477a.
 — larvae, bionomics 488a.
 — — in domestic animals 366a.
 Cestodes from Antarctic 650c.
 — — Australia 607a.
 — in birds in Philippine Islands 343a.
 —, encysted stages 732cc.
 —, immunity 655b.
 — in mammals in Cochinchina 480c.
 — — man 600c.
 — —, pumpkin seeds 327a.
 — — — in U.S.A. 163a.
 —, *Omphalia lapidescens* 113a.
 — in *Passer domesticus* 687a.
 —, physiology 729.
 — in sheep & goat in India 604b.
 —, technique for staining 319b.
 Cestoidei n. subclass 465a.
 Ceylon, human helminths 289a.
Chabertia rishati n. sp. in camel 603c.
Chaetophractus villosus, oxyurid in 224b.
 — —, *Trichinella* in 224a.
Chamaeleon macrolepis, *Physaloptera* n. sp. in 585a.
 Chamaeleons, helminths in 75a.
 Chambersiellinae n. subf. 47a.
Chandlerella lepidogrammi n. sp. in *Lepidogrammus cumingi* 594d.
Cheilosporira hamulosa disease in poultry 182a.
Chelydra serpentina, *Eustoma chelydrae* in 217r.
 Chile, *Cysticercus tenuicollis* 480a.
 —, human helminths 625a, 625b.
Chiloscyllium indicum, *Pedunculacetabulum* n. sp. in 604b.
 China, *Ascaris* 90d, 90f, 90h.
 —, *Clonorchis* 17b.
 —, dog & cat helminths 196c.
 —, filariasis 290a, 290b.
 —, frog trematodes 38a.
 —, helminths 17a, 90a, 591b.
 —, human helminthiasis 90g, 321a.
 —, helminths 17c.

INDEX OF SUBJECTS.

- China, mammalian nematodes 341a.
 —, *Paragonimus* 3d.
 —, *Schistosomiasis japonica* 290d.
 —, *Strongyloides ratti* 203c.
Chinluta indica n. g., n. sp. in *Nettion crecca* 903j.
Chiorchis purvisi n. sp. in *Heosemys grandis* 170a.
Chiostichorchis to *Cladorchis* 170a.
Choanotaenia corvi n. sp. in *Corvus rhipidurus* 87b.
 — *infundibulum* cysticeroid in house-fly 60e.
 — —, life-history 322a.
 — *tringae* n. sp. in *Tringa* sp. 87b.
Choerostrogylus to *Metastrongylus* 732dv.
Cichlosoma biocellata, *Bothriocephalus* n. sp. in 478a.
Clarias sp., *Philometra* n. sp. in 249.
 — *lazera*, *Stocksia* n. g., n. sp. in 352a.
 — *magur*, trematode in 604b.
Cleptodiscus to *Pseudodiscus* 170a.
Clinostomum spp. metacercariae 732e.
 — sp. in fowl 123a.
 — *attenuatum* in pigeon 32k.
 Clonorchiasis in dog, gentian violet 139c.
 — — man in Japan 187a.
 — — —, reviewed 171a.
 — — sinensis in Madagascar 15d.
 Clonorchis in China, epidemiology 17b.
 — sinensis & carbohydrate metabolism 57b.
 — —, culture *in vitro* 704.
 — — intermediaries in China 709.
 — — in man, pathology 9a.
 — — metacercariae, morphology 706.
Cobitis taenia, 2nd intermediary for *Metorchis* n. sp. 69c.
 Cochín-China, mammalian cestodes 480c.
 Coenuriasis in sheep 732dr.
 Coenurus in *Cercopithecus nictitans* 322d.
 Coffee, *Anguillulina pratensis* in 272a.
Coitocaecum sp. in fish, life-history 213a.
 Colic in horse 141a.
Colinus graysoni, *Oxyspirura* (*Oxyspirura*) n. sp. in 256b.
Columba livia, *Ascaridia* n. sp. in 603i.
Columbigallina passerina, *Vagrifilaria* n. g., n. sp. in 144b.
 Composting to control helminths 90a.
Conepatus chilensis, *Filaria* n. sp. in 334a.
Contracaecum aduncum in *Pleuronectes flesus*, life-history, 471a, 489a.
 — —, life-history 471b.
 — *antarcticum* n. sp. in *Pygoscelis adeliae* 650d.
 — *crenulatum* n. sp. in *Cancroma cochlearia* 333a.
Contracaecum fuhrmanni n. sp. in *Plotus levaillandi* 70c.
 — *milviensis* n. sp. in *Milvus lineatus* 732br.
 — *osculum* redescribed 45b.
 — *pseudodontum* n. sp. in *Phalacrocorax* sp. 70c.
 — *radiatum* redescribed 45b.
 — *spiculigerum*, life-history 199j, 322j.
 Control, ancylostomiasis 469a, 732df.
 —, *Anguillulina dipsaci* 14a.
 —, ascariasis 732ei.
 —, *Ascaridia galli* 50a, 467a.
 —, *Cysticercus bovis* 67a, 67b, 93b.
 —, *Dicrocoelium dendriticum* 273a.
 —, domestic animal helminths 93a, 105a, 296a, 649a.
 —, equine strongylosis 21a.
 —, *Fasciola hepatica* 94a.
 —, fascioliasis 487e.
 —, filariasis 304g.
 —, fowl helminths 495a.
 —, helminth ova 732dl.
 —, helminthiasis 530b, 530c, 533a, 619a.
 —, helminth 90a, 732bk.
 —, *Heterodera marioni* 54c, 88c, 142a, 179b.
 —, — *schachtii* 29a, 29b, 107c, 111a, 111d, 217g, 329a, 394b.
 —, hookworm 732cg.
 —, horse helminths 474a.
 —, — strongyle larvae 196d.
 —, — strongyles 146a.
 —, human ancylostomiasis 181a, 205a.
 —, — schistosomiasis 201a.
 —, liver-fluke disease 530a.
 —, *Microfilaria malayi* 304a, 311d.
 —, poultry helminths 302a.
 —, roe-deer helminths 20a.
 —, schistosome intermediaries 23c, 36f.
 —, schistosomiasis 11, 13a.
 —, sheep helminths 315a, 491c.
 —, silver fox helminths 732ec.
 —, strongyle ova & larvae 673c.
 —, strongyles 180a.
 —, strongyloidiasis 732y.
 —, trematode infections 115b.
 —, trichinellosis 222a.
Cooperia curticei in sheep, acquired immunity 322j.
 — — —, location 217m.
 — *laterouniformis* n. sp. in buffalo 203b.
 — *okapiae* n. sp. 644b.
Coracias garrula, nematodes in 732bi.
Coregonus wartmanni, *Trienophorus nodulosus* in 69a.
Coretus corneus, intermediary for *Parafasciolopsis fasciolaemorphia* 559a.
Corvus rhipidurus, *Choanotaenia* n. sp. in 87b.
Corynosoma australe n. sp. 605a.
 — *tumitae* in *Phalacrocorax africanus* 516a.

INDEX OF SUBJECTS.

Corynosoma turbidum n. sp. in *Phalacrocorax neglectus* 516a.
 Costa Rica, human helminths 331a.
 Cotton, "damping off" 126b.
Cotugnia ilocana n. sp. 343a.
 — *rimandoi* n. sp. 343a.
Cotylophoron cotylophorum, life-history 604c.
Cotylurus spp., cercariae differentiated 114n.
 — *orientalis* in *Nettion crecca* 603f.
Crenosoma in silver fox, iodine solutions 732ce.
Crepidostomum cornutum, life-history 114e, 143b.
Crocidura russula, helminths in 51a.
Crocothemis servilia, 2nd intermediary for *Loxogenes liberum* 199k.
 Crustacea, helminths in 341c.
 —, 1st intermediaries for *Contracaecum aduncum* 471b.
Cruzia tentaculata redescribed 165a.
Cryptocotyle lingua cercariae, physiology 322j.
 Cuba, *Capillaria* spp. 417b.
 —, domestic animal helminths 225a.
 —, *Fasciola hepatica* 331b.
 —, human helminths 133d, 226a, 629b, 629c, 629d.
 —, meat inspection 133e.
Culex fatigans, intermediary for *Wuchereria bancrofti* 57a.
 — *pipiens*, microfilariae in 203f, 591c.
 Currant, black, *Aphelenchoides ribes* disease in 339a.
Cyathostoma phenisci n. sp. in *Pemiscus humboldti* 74a.
Cyclobothrium imistii n. sp. 159.
 Cyclops, 1st intermediary for *Bothriocephalus rarus* 114b.
 — *leuckarti*, 1st intermediary for *Canallanus* n. sp. 114p.
Cynomys ludovicianus, *Trichostrongylus* n. sp. in 116b.
 Cyprus, sheep & goat helminths 492a.
 Cysticerci in meat, refrigeration 242a.
 Cysticerciasis, cerebral, in man 280a, 298a, 515a, 543a, 577a, 600b, 639b.
 — & epilepsy in man 202b.
 — in man 48c, 84a, 90c, 117b, 117c, 185a, 347b, 511a, 557a, 598a, 647a.
 — —, diagnosis 224e.
 — monographed 585e.
 —, ocular 447a.
 — in pig 570a.
 — *cellulosae* in man 580b, 679a.
Cysticercus & cancer 410a.
 — & meat inspection 612a.
 — spp. in animals, reviewed 392a.
 — *bovis* in cattle, immunity 29e.
 — —, control 67a, 67b, 93b.
 — — in man in U.S.A. 732dn.
 — —, rate of growth 148b.

Cysticercus cellulosae in man in India 189a.
 — — pig, precipitin reaction 519a.
 — *fasciolaris*, abnormal, in *Mastomys erythroleucus* 76b.
 — *longicollis* & cancer in rat 151a.
 — *multiformis* n. sp. in fox 244b.
 — *pisiformis* 31b.
 — in rabbit, immunity 408a.
 — *temicollis* disease in sheep 173b.
 — in *Odocoileus hemionus* 212d.
 — — sheep in Chile 480a.
Cystidicola farionis in brown trout 263b.
Cystodiplostomum hollii n. g., n. sp. 479a.
 Cytology, *Ascaris* ova 274a.
 —, *Paragonimus kellicotti* 143c.
 —, *Rhabditis* spp. 217i.
Dactylella bembicodes destroying nematodes 526a.
Dactylocotyle minus redescribed 3c.
Dactylogyrus macracanthus, life-history 503b.
 — — in *Tinca tinca*, monographed 69b.
Dadayius to *Cladorchis* 170a.
Dadaytrema to *Chiorchis* 170a.
 Dahlias, *Heterodera marioni* in 46b.
Dasymetra villicaeca, life-history 351a.
Dasyprocta agouti, *Monodontus* n. sp. in 207h.
Dendroterina lintoni n. sp. 217q.
 — *nycticoracis* n. sp. in *Nycticorax nycticorax* 47 l.
 Denmark, plant nematodes 234a.
Deradena acuta & *D. obtusa* to *Haplo-splanchnus* 732ck.
 — *ovalis* to *Haplodena varia* 732ck.
Dermatemytrema trifoliata n. g., n. sp. 732db.
Deropristis inflata in *Anguilla anguilla*, life-history 92d.
 Diagnosis, ascariasis 631a.
 —, domestic animal helminthiasis 389a.
 —, dracontiasis 531a.
 —, equine strongylosis 295a.
 —, *Haemonchus contortus* 235b.
 —, human ascariasis 506a.
 —, — cysticerciasis 224e.
 —, schistosomiasis 531b.
 —, — *mansoni* 71a.
 —, trichinelliasis 464a, 694.
Diclidophora pagelli n. sp. in *Pagellus centrodontus* 3c.
Diclidophoropsis tissieri n. g., n. sp. in *Macrurus laevis* 3c.
Dicrocoelium, see also Liver-fluke.
 — *dendriticum*, bionomics 211a.
 —, life-history 69d, 600a, 652a, 732dj.
 — in sheep, control 273a.
 — *proxillicens* n. sp. in *Kakatoë sulphurea* 322c.

INDEX OF SUBJECTS.

- Dicrostonyx hudsonius*, *Heligmosomum*
n. sp. in 732m.
- Dictyocaulus* in horse, pathology 732h.
— — —, treatment 732bx.
— larvae, bionomics 732cu.
— in sheep, pyrethrine 175a.
— — —, treatment 732cz.
— *filaria* in roe-deer 371c.
— *hadweni* in reindeer 732eg.
— *viviparus* in bison 371c.
— — — cattle 240e.
- Dictyonograpus pipistrelli* n. sp. 732dq.
- Didelphis aurita*, *Gongylonemoides marsupialis* in 207i.
- Didymocystis wedli* in *Thynnus thynnus*, pathology 257f.
- Digenea, life-history & taxonomy 322j.
— in selachian fishes, host-list 74d.
- Dilophus vulgaris*, *Neoaplectana* n. spp. in 66a.
- Diectophyme renale* 482d.
— — in dog 224h, 680a, 726.
— — — mink 105b.
- Dioptrornis tornensis*, *Oxyspirura* n. sp. in 249.
- Diorchis skrjabini* n. sp. in *Anas circia* 732el.
— *visayana* n. sp. 343a.
- Diphyllbothrium anaemia* 580a.
— extracts in cat, haematology 732ds.
— in man 228a.
—, no asexual reproduction 732ep.
— reclassified 114r.
— spp. in Canada 322g.
— — — cat 137a.
— — — listed 732dp.
— *arctocephali* n. sp. in *Arctocephalus tasmanicus* 607a.
— *arctocephalinum* n. sp. 605a.
— *erinacei* in cat & dog in Dutch East Indies 576b.
— —, pathology & immunology 98a.
— — to *Spirometra* n. g. 114r.
— *giljadicum* n. sp. in man 732dp.
— *latum* in Canada, variations 287a, 322g.
— — — dog, haematology 665a.
— —, geographical distribution 732cj.
— —, immunity 257g.
— —, incidence 322g.
— — infection in dog 322g.
— — in man 47n, 554a.
— *luxi* n. sp. in man 732dp.
— *mansonoides*, life-history 217o, 322g.
— — in *Lynx rufus* 114t.
- Diplectanotrema balistes* n. comb. 37b.
- Diplo-discus japonicus* nom. nov. 38a.
— *mehrai* n. sp. 603g.
— *sinicus* n. sp. 38a.
— *subclavatus*, various anthelmintics 265a.
- Diplogaster aphodii* n. sp. in *Aphodius* spp. 66a.
— *magnibucca* n. sp. 66a.
- Diplogaster secundus* n. sp. in *Aphodius* spp. 66a.
— *stercorarius* n. sp. 66a.
- Diplogonoporus grandis*, morphology 572b.
- Diplo-sentis amphacanthi* n. g., n. sp. in *Amphacanthus oramin* 594b.
- "Diplostome" *medusae* n. sp. 479a.
- Diplostomulum ambystomae* n. sp. in *Ambystoma opacum* 60b.
— *desmognathi* n. sp. 32b.
— *mutadomum* n. sp. 114d.
- Diplostomum buteii* n. sp. in *Buteo rufinus* 349a.
— *flexicaudum* larvae in *Stagnicola emarginata* 322i.
— *ketupanensis* n. sp. in *Ketupa zelonen-sis* 349a.
— *volvulus* in rainbow trout 574a.
- Dipylidium* spp., life-history 393b.
— *caninum* in dog, "Nemural" 674a.
- Dirofilaria* reviewed 207a.
— (*Dirofilaria*) n. subg. 697.
— *immitis* in dog, immunity 698.
— —, immunology 322j.
— —, life-history 87d, 87g, 92b.
— —, periodicity 201b.
— — in U.S.A. 322j.
— —, various anthelmintics 635a.
— *indica* n. sp. in dog 604b.
— (*Noctiella*) n. subg. 697.
— *repens* & *D. immitis* differentiated 334d.
— — in dog in Brazil 334d.
- Discogasterinae in fishes 604b.
- Dispharynx spiralis*, physiological strains 732q.
- Distomiasis 374a.
- Dog, *Ancylostoma caninum* in 32g, 322j.
—, ancylostomiasis in 1g.
—, ascariasis in 58b.
—, *Diectophyme renale* in 224h, 680a, 726.
—, *Diphyllbothrium erinacei* in 98a, 576b.
—, — *latum* in 665a.
—, — infection in 322a.
—, *Dirofilaria* n. sp. in 604b.
—, — *immitis* in 698.
—, — *repens* in 334d.
—, *Echinococcus granulosus* in 270e.
—, filariasis in 192d, 586a.
—, Haemonstrophylosis vasorum in 636b.
—, helminths in 186a, 196c, 491a, 678c, 732s.
—, hookworm in 162a, 210a.
—, *Metorchis albidus* in 60f.
—, *Microfilaria immitis* in 196e.
—, schistosomiasis in 190b, 604c.
—, *Trichinella* in 140b, 609a.
—, *Trichuris* in 184a.
—, — *vulpis* in 720.
- Dolichoenterum lamirandi* n. sp. in *Labrax lupus*, life-history 91a.

INDEX OF SUBJECTS.

- Donkey, habronemiasis in 87f.
 Dracontiasis in India 311a.
 — — man 303a.
 —, X-ray diagnosis 531a.
 Dracunculus, rare location 15c.
 — larvae, technique for staining 32j.
 — sp. in *Varanus* sp. 603a.
 — *medinensis* 429a.
 — — redescribed 114f.
 Dragon flies, intermediaries for *Prosthogonimus* sp. 432a.
 Dubioxyuridae n. fam. 585d.
Dubioxyuris macroscelidis n. g., n. sp. in *Macroscelides proboscideus* 585d.
 Duck, *Metorchis* n. sp. in 69c.
 —, *Oshimaia taiwana* in 285f.
 —, *Sphaeriodotrema globulus* in 244c.
 Ducks controlling *Limnaea natalensis* 646a.
Ducula badia, *Railietina* (*Paromella*) n. sp. in 480c.
 Dutch East Indies, *Anguillulina pratensis* 272a.
 — —, *Diphyllobothrium erinacei* 576b.
 — — —, human filariasis 188a.
 — — —, — helminths 304d.
 — — —, *Microfilaria malayi* 97d, 188b.
 — — —, *Schistosomiasis japonica* 304c, 304e.
 East Africa, chamaeleon helminths 75a.
 — —, equine strongylosis 291b.
 — —, human helminthiasis 335a.
 — Prussia, *Opisthorchis felineus* 70a.
 — —, roe-deer helminths 150c.
Echinococcus felidis n. sp. in lion 585d.
 — *granulosus* in dog, experimental infections 270e.
Echinoparyphium syrdariense n. sp. in fowl 732 l.
Echinorhynchus coregoni, variations 237e.
 — *zancloerhynchi* n. sp. in *Zancloerhynchus spinifer* 650b.
Echinostoma paraudum in North America 89b.
 — *pekinensis* n. sp. in *Anas domestica* 591d.
 — *revolutum*, life-history 99a.
 — —, regeneration 119g.
 — —, synonymy 99a.
Echinuria heterobrachiata n. sp. 732er.
 — *hypognatha* n. sp. 732er.
 — *minor* n. sp. in *Sarkidornis melanotus* 644a.
 Ecology, *Anguillulina aptini* 106b.
Ectemurus indicus n. sp. 604b.
 Egypt, ancylostomiasis 254b, 254c.
 —, human helminths 28a.
 — —, schistosomiasis 238a.
 —, schistosome intermediaries 28b.
 —, schistosomiasis 11, 71b, 115c.
Elaphostrongylus odoicoilei in *Odocoileus columbianus*, pathology 732bm.
 Elephant, African, *Microfilaria* n. sp. in 74c.
 —, Indian, helminths in 715.
 Elephantiasis discussed 314a.
 — in man 362a, 362b, 483a, 523a.
 — — —, surgical treatment 304b.
 Elk, helminths in 244d.
Ena obscura, intermediary for *Dicrocoelium dendriticum* 69d.
Encotyllabe pagrosomi redescribed 47i.
 Enoplida, oesophagus 540a.
 Enterobiasis, carbon tetrachloride 732ek.
 — in man 206b, 322j, 613a.
 — — — in U.S.A. 322j, 353a, 550a.
 —, technique for diagnosing 73a, 353a.
 —, tetrachlorethylene 675a.
 —, treatment 345b, 411a, 597a, 714.
 — & vulvovaginitis 732du.
 Enterobius & appendicitis in man 347c.
 —, immunology 322j.
 — in man, antimony 269d.
 — — —, quinine 202a.
 — *vermicularis*, rarity of male 25a.
 — —, tetrachlorethylene 193b.
Eosentis rigidus in *Scizothorax zarudnyi* 618a.
Epibdella (*Benedenia*) *convoluta* n. sp. 159.
 — (*Epibdella*) *epinepheli* n. sp. 159.
 — *sekii* n. sp. 159.
 — *mellei* in *Trachinotus* spp., immunity 687b.
 Epidemiology, *Ascaris* in China 90d, 90f, 90h.
 —, *Clonorchis* 17b.
 —, sheep stomach worms 29h.
 Epilepsy & cysticerciasis in man 202b.
 Equines, helminths in 199b, 491b.
 —, strongyles in 1c.
 —, strongylosis in 2a, 291b, 295a.
 —, *Trichostrongylus axei* in 322j.
Esox lucius, *Raphidascaris canadensis* in 322j.
Eucephalobus teres in narcissus 217d.
Euchordodes libellulovivens n. g., n. sp. 150a.
Eucoleus to *Capillaria* 212e.
 — *aerophilus* in silver fox in Lithuania 670a.
Eucyathostomum dentatum redescribed 207c.
Eurytrema brauni n. sp. in *Strix flammarum* 563a.
 — *epomopsis* n. sp. 732dq.
 — *pancreaticum*, bionomics 211a.
 — — in sheep, pathology 732eq.
Eusimulium ochraceum, intermediary for *Onchocerca* 5a.
Eustomos to *Plagiorchini* 237a.
 — *chelydrae* in *Chelydra serpentina*, life-history 217r.

INDEX OF SUBJECTS.

- Eustrongylides* sp., haemoglobin in 114g.
 — larvae, physiology 322j.
Exorchis oviformis, life-history 508a.
- Farancia abacura*, *Cercorchis* n. sp. in 212a.
 —, *Stomatrema* n. sp. in 212a.
 —, *Vitellostrema fuspipora* in 212a.
Fasciola, see also Liver-fluke.
 — *gigantica* in Hawaii 32m.
 — — man in Russia 732bt.
 — *hepatica*, control 94a.
 — in Cuba 331b.
 — — man 33a.
 — — sheep in New Zealand 578a.
 Fascioliasis in cattle, control with calcium cyanamide 487e.
 — —, hexachlorethane 487d.
 — *hepatica* 728.
 — in man 92a.
 —, subcutaneous, in man 92c.
 Fasciolopsiasis in man, treatment 901.
Fasciolopsis buski, experimental infections 263a.
 —, life-history 257a.
 Felines, *Ascariasis leonina* in 140a.
Felis pardalis, helminths in 16a.
Fibricola spp. redescribed 167b.
Filaria carvalhoi n. sp. in *Conepatus chilensis* 334a.
 — *kitti* n. sp. 648b.
 — *marcinowskyi* to *Pharyngosetaria* n. g. 732cf.
 — *mavis* to *Ornithofilaria* n. g. 703.
 — *oculi* in horse 192b.
 Filariasis & arthritis 472a.
 — in dog, *Antimosan* 192d.
 — — in Italy 586a.
 — & lymphangitis in man 326a.
 — in man 232a, 303a, 473a.
 — — in Abyssinia 266a.
 — — China 290a, 290b.
 — —, control 304g.
 — — in Dutch East Indies 188a.
 — — India 102b.
 — — Indo-China 178b, 284b, 420a.
 —, ocular, in man 437b.
 —, —, — in Russia 669b.
 — *bancrofti* 520a.
 — in Antigua 36e.
 — — man 15a.
 — — New Guinea 97a, 97b.
 — conjunctivae in man in Italy 135e.
 — perstans in man 4a.
 Filariid in eye of man 475a.
 Filarioidea in man 43a.
Filaroides falciformis in badger, life-history 371a.
 — *myonaxi* n. sp. in *Myonax sanguineus* 644a.
Filicollis anatis in swan 263b.
 Fish, *Coitocaecum* sp. in 213a.
 Fishes, *Acanthocolpidae* in 604b.
- Fishes, *Apocreadium* n. g., n. spp. in 404.
 —, *Bucephalidae* in 354a.
 —, cestode in 477a.
 —, *Discogasterinae* in 604b.
 —, helminths in 732bp.
 —, intermediaries for *Contracaecum spiculigerum* 199j.
 —, 2nd intermediaries for *Apophallus venustus* 16b.
 —, — — *Camallanus* n. sp. 114p.
 —, — — *Clonorchis* 17b.
 —, — — *Contracaecum aduncum* 471b.
 —, — — *Heterophyes heterophyes* 711.
 —, *Lepocreadium album* in 135a.
 —, *Monogenea* in 159, 322j.
 —, *Neodiplostomum* infection in 264a.
 —, *Podocoryle* spp. in 199f.
 —, salmonoid, *Tetraonchus* n. sp. in 47j.
 —, selachian, *Digenea* in 74d.
 —, trematode larvae in 312a.
 —, trematodes in 281a, 604b.
 —, *Trichinella* in 470a.
 Fleas, intermediaries for *Dipylidium* spp. 393b.
 Fluke disease in fowl 546a.
 Fly, house, intermediary for *Choanotaenia infundibulum* 60e.
Fossaria ollula, intermediary for *Fasciola gigantica* 32m.
Fossor angertrudae n. g., n. sp. in *Taxidea taxus* 167d.
 Fouadin, kidney test 266e.
 Fowl, *Ascaridia galli* in 50a, 467a.
 —, — *perspicillum* in 10a.
 —, *Clinostomum* sp. in 123a.
 —, defaecation timing 47p.
 —, *Echinoparyphium* n. sp. in 732 l.
 —, fluke disease in 546a.
 —, gape-worm in 604c.
 —, helminths in 133f, 495a.
 —, *Heterakis gallinae* & "Blackhead" in 173d.
 —, *Leiperacanthus* n. g., n. sp. in 352b.
 —, *Raillietina cesticillus* in 322j.
 —, spirurids in 604c.
 —, trematode in 604c.
 Fox, *Cysticercus* n. sp. in 244b.
 —, helminths in 497b.
 —, silver, *Crenosoma* in 732ce.
 —, —, *Eucoleus aerophilus* in 670a.
 —, —, helminths in 732ec.
 —, —, nematodes in 732f.
 —, —, *Pseudamphistomum truncatum* in 69a.
 France, human ancylostomiasis 86b.
 —, — helminthiasis 692.
 Friesland, hydatidosis 236a.
 Frog, *Haliopogon* n. sp. in 322j.
 —, *Phyllodistomum* n. sp. in 169b.
 Frogs, trematodes in 38a.
 Fungi controlling *Heterodera marioni* 54c.

INDEX OF SUBJECTS.

- Gaigeria pachyscelis* in *Boselaphus tragocamelus* 340a.
 —, life-history 340a.
Galea leucoblephara, nematodes in 207e.
Gallium Aparine, reservoir for *Anguillulina dipsaci* 112a.
Galumna sp., intermediary for *Momiezia expansa* 229b.
Gammarus pulex, 2nd intermediary for *Allocreadium angusticollis* 293a.
Ganeo kumaonensis n. sp. 603g.
 Gape-worm in fowl in India 604c.
Gasterocercodes brasiliensis, *Rhabditis* n. sp. in 442a.
 Gastropods, intermediaries for *Brachylaemus suis* 80a.
Genetta rubiginosa, *Anoplocephala* n. sp. in 585d.
Gemitocotyle acirrus n. g., n. sp. in *Holconotus rhodoterus* 60c.
 Germany, *Anguillulina dipsaci* 426a.
 —, Gordioidea 150a.
 —, human helminthiasis 8a.
 —, — strongyloidiasis 68a.
 —, *Leucochloridium* sp. 573a.
 —, lungworms in 400.
 —, meat inspection 83a.
 —, *Parafasciolopsis fasciolaemorpha* 21c.
 —, wild animal helminths 231a.
Gigantobilharzia egreta n. sp. in *Bubulcus ibis* 603j.
Glomericiirrus amadae n. g., n. sp. 157.
Glossineta orientalis n. g., n. sp. 244a.
Glypthelminis queta in *Rana* spp., life-history 368a.
 — *staffordi*, excretory system 203d.
Gnathostoma spinigerum, life-history 32q.
 Gnathostomiasis in man in India 311c.
 Goat, cestodes in 604b.
 —, helminths in 338a, 492a, 732bw.
 —, liver-fluke in 108a.
 —, *Trichostrongylus retortaeformis* in 389f.
Gobius giuris, *Opegaster* n. sp. in 606a.
Gongylonema baylisi n. sp. in *Tayassu tajacu* 207i.
 — *marsupialis* to *Gongylonemoides* n. g. 207i.
Gongylonemoides n. g. for *Gongylonema marsupialis* 207i.
 — *marsupialis* in *Didelphis aurita* 207i.
 — — *Metachirops opossum* 207i.
Gongylura vaginata in *Gypagus papa* 352c.
Goniobasis livescens, 1st intermediary for *Apophallus venustus* 16b.
 — —, — & 2nd intermediary for *Macravestibulum eversum* 378a.
 Goose, helminths in 732bf.
 —, *Hymenolepis lanceolata* in 732dh.
 Gordioidea in Germany 150a.
Gordionus, 8 n. spp. 150a.
 —, 2 n. subspp. 150a.
Gordius, 7 n. spp. 150a.
Gorgodera amplicava, life-history 453a.
Gorgoderina, key to spp. 221b, 322e.
 — to *Phyllodistomum* 169b.
 — *bilobata* n. sp. 32b.
 — *tanneri* n. sp. 322e.
 — *tenua* n. sp. 32b.
 — *vitelliloba* redescribed 221b.
 Graphidiinae n. subf. 568a.
Graphidium strigosum, life-history 93c, 371b.
Graptomys geographica, *Macravestibulum* n. sp. in 378a.
 Grasshoppers, *Mermis subnigrescens* in 313a.
 Greece, *Ancylostoma duodenale* 716.
 —, human helminths 716.
 Grouse, helminths in 661a.
 Guadeloupe, streptococcal lymphangitis 285b.
 Guatemala, *Onchocerca* 5a.
 Guinea-pig, *Metastrongylus* in 32f.
 —, *Strongyloides ratti* in 322j.
Gyliauchen n. spp. 604b.
 Gyliauchenidae reviewed 534a.
Gypagus papa, *Gongylura vaginata* in 352c.
Gyrocoelia kiewietti n. sp. in *Hoplopterus armatus* 585d.
 Gyrodactyloidea, key to genera 37b, 116a.
 — from North America 413a.
 — n. class 465a.
Gyrodactylus gurleyi n. sp. 37b.

Habronema clarki n. sp. in *Hydrochoerus isthmus* 217 l.
 — *megastoma*, bionomics 732dz.
 Habronemiasis in donkey 87f.
 — — horse 643a.
 Haematology, ancylostomiasis 732et.
 —, *Diphyllobothrium* extracts 732ds.
 —, — *latum* 665a.
 —, helminthiasis 732eh.
 —, *Metastrongylus* 32f.
 —, trichinellosis 319a.
 —, *Trichuris vulpis* 720.
 Haemonchiasis in sheep 140c.
Haemonchus contortus in sheep, differential diagnosis 235b.
 — *okapiae* n. sp. 644c.
 Haemostrongylosis vasorum in dog, pathology 636b.
Haemostrongylus ratti n. sp. in rat 379a.
Halcyon chelicuti, *Thelazia* n. sp. in 249.
Haliaeetus leucogaster, *Pygidiopsus* n. sp. in 594e.
Haliotrema spirophallus n. sp. 159.
Halipegus eccentricus n. sp. in frog 322j.
Hamatospiculum revised 256c.
 — *brasiliense* to *H. insignis* 256c.
 — *quadridens* to *H. foveatum* 256c.

INDEX OF SUBJECTS.

Haplocladus n. sp. 604b.
Haplometrana to *Plagiorchinae* 237a.
 — *utahensis* n. sp. in *Rana pretiosa*, life-history 32a.
Haplometridae n. fam. 114i.
Haploparaxis sanjuanensis n. sp. 343a.
Haplorchis yokogawai invading intestinal mucosa 529a.
Haplospilichnidae in fishes 604c.
Haplospilichnus adacutus n. sp. 732ck.
 — *brachyurus* n. sp. 732ck.
 — *pachysomus* in *Mugil* spp. 92d.
 — *pomacentri* n. sp. 732ck.
 — *sparisomae* n. sp. 732ck.
 Hare, helminths in 322j.
Hatertia gallinarum in *Heterotetrax vigorsi* in South Africa 536a.
 Hawaii, ancylostomiasis 664b.
 —, *Fasciola gigantica* 32m.
 —, *Trichinella* 322j.
 —, trichinellosis 664a.
Hawkesius to *Chiorchis* 170a.
 Hedgehog, *Diphyllbothrium erinacei* in 98a.
Helicella obvia, intermediary for *Synrheticaulis capillaris* 257b.
Helicometrina revised 237c.
 — *elongata* n. sp. in *Caularchus mendricus* 237c.
Heligmonoides mazzai n. sp. 207e.
Heligmoskrjabinia skrabini n. g., n. sp. in *Agouti paca* 417a.
Heligmosomum hudsoni n. sp. in *Dicrostonyx hudsonius* 732m.
Helisoma antrosa, 1st & 2nd intermediary for *Eustomos chelydrae* 217r.
 — *trivolvus*, 1st intermediary for *Alloglossidium corti* 199e.
 Helminth ova, bionomics 32o.
 — —, chemical control 732dl.
 — — in composts, viability 552h.
 — — & larvae, technique for isolating from grass 732bd.
 — —, technique for counting 732cm.
 — —, — examining water 552f.
 — —, — preserving 206a.
 — — transmitted by sparrows 732cn.
 — — — "Tukemono" 31a, 198a.
 — — & vegetable artefacts in faeces 41a, 401, 695, 721.
 — — toxins 732co.
 Helminthiasis & avitaminosis 423a.
 — in birds 502b.
 — — cat 388c.
 — — cattle 491e.
 — —, control 619a.
 — —, — by sanitation 530b, 530c, 533a.
 — in domestic animals 156, 336a.
 — — —, control 93a, 105a.
 — — —, diagnosis 389a.
 — — — in Poland 148c.
 — — fur-bearing animals 502a.
 — — horse 184c.

Helminthiasis in horse, haematology 732eh.
 — — —, treatment 498a, 713.
 — — — man 323a, 641a, 655a, 712.
 — — — in Argentine 224i, 416b.
 — — — — Brazil 504a.
 — — — — China 90g, 321a.
 — — — — East Africa 335a.
 — — — — France 692.
 — — — — Germany 8a.
 — — — — Indo-China 178a.
 — — — — Puerto Rico 223a.
 — — & meningitis in man 342a.
 — — in moose 184b.
 — — pig, reviewed 174b.
 — — poultry 240b.
 — — —, treatment 22a.
 — — & pregnancy in man 138a.
 — — in roe-deer in East Prussia 150c.
 — — sheep 95a, 103a.
 — — —, copper & nicotine sulphates 133a.
 — — — in Britain 107a.
 — — —, treatment 588a.
 — —, Widal reaction 544c.
 — — in wild animals 494a.
 Helminthology in India 604a.
 —, medical, in Russia 552j.
 —, nomenclature 459a.
Helminthoxys caudatus n. g., n. sp. 207e.
 Helminths in *Alces alces* 393a.
 — — animals 64a.
 —, antigen, polysaccharide fractions 199a.
 — — in *Arctiocephalus forsteri* 605a.
 — — birds in U.S.A. 413c.
 — — Blattidae 732ea.
 — — brown trout 263b.
 — — buffalo 547a.
 — — cat in Poland 507a, 678b.
 — — — — Russia 732di.
 — — chameleons in East Africa 75a.
 — — China, control by composting 90a.
 — — *Crocodylus russula* 51a.
 — — Crustacea 341c.
 — — dog & cat 186a.
 — — — — in China 196c.
 — — — —, treatment 491a.
 — — — — in Poland 678c.
 — — — — Russia 732s.
 — — domestic animals in Australia 82a.
 — — — — Brazil 732da.
 — — — —, control 296a, 649a.
 — — — — in Cuba 225a.
 — — — —, immunity 673a.
 — — — —, location 593a.
 — — — — in Russia 732cw.
 — — — —, text-book 248.
 — — elk, new records 244d.
 — — & epilepsy in man 567b.
 — — in equines 491b.
 — — — in Panama 199b.
 — —, erratic, in man 34a.

INDEX OF SUBJECTS.

Helminths in *Felis pardalis* in Trinidad 16a.

- fishes in Russia 732bp.
- fowl, control 495a.
- , dyes 133f.
- fox 497b.
- goat 338a.
- goose in Russia 732bf.
- grouse 661a.
- hare in U.S.A. 322j.
- horse 23b.
- , control 474a.
- , egg count 656a.
- , faecal examination 532a.
- , precipitin reaction 705.
- in Russia 732bb, 732cp.
- *Hyaena crocuta* 261c.
- , immunity 322j.
- in Indian elephant 715.
- , international control 732bk.
- in man 247.
- & animals in China 17a.
- in Belgian Congo 258a.
- Brazil 132a.
- Canada 40a.
- Ceylon 289a.
- Chile 625a, 625b.
- China 17c.
- Costa Rica 331a.
- Cuba 133d, 226a, 629b, 629c, 629d.
- Dutch East Indies 304d.
- Egypt 28a.
- Greece 716.
- Indo-China 284c.
- Mauritius 341b.
- Mexico 165b, 358a.
- , pathology 662a.
- in Philippine Islands 569a.
- Russia 552a, 552c, 552d, 552e.
- South Pacific 549a.
- Spain 224c.
- U.S.A. 114c, 527a.
- Venezuela 276a.
- Yucatan 360a.
- meat inspection in Cuba 133e.
- , morphology 732bn.
- & neoplasms 365a.
- in nutria 648b.
- okapi 644c.
- *Onchorhynchus gorbusha* 732ch.
- Palestine 518a.
- listed 560a.
- , parasitic adaptation 719.
- , physiology 684a.
- in pig 355a, 502c.
- in Australia 250a.
- , early infections 217k.
- , skin reactions 730.
- in Yugoslavia 387a.
- pigeon in Canada 89b.
- poultry 183a, 389e.
- , control 302a.

Helminths in poultry in Russia 732ba.

- rabbit 406.
- , incidence 58a.
- rat, immunity 162e.
- & mouse in Italy 259a.
- roe-deer, control 20a.
- salamanders in U.S.A. 32b, 299a.
- sheep 176a.
- , bluestone & nicotine sulphate 195b.
- in Britain 717.
- , control 491c.
- , by animal husbandry 315a.
- & goat in Cyprus 492a.
- Russia 732bw.
- , incidence 196f.
- in Russia 732dt.
- , survival 180b.
- , treatment 27a.
- silver fox, control 732ec.
- , skin reactions 119b.
- in Somaliland 87b.
- swan 263b.
- , toxicity 468a, 468b.
- transmitted by refuse 732en.
- in turkey 388b.
- vertebrates in Antigua 239a.
- China 591b.
- *Vulpes lagopus* 732bv.
- wild animals 541a, 681a.
- in Germany 231a.
- , X-ray examination 364a.
- in zoo animals 297c, 334e, 466a, 487b.
- Helostomatis sakrei* n. sp. 111e.
- Heosemys grandis*, *Chiorchis* n. sp. in 170a.
- Herpetodiplostomum caimanicola* n. comb. 479a.
- *testudinis* n. g., n. sp. 479a.
- Heterakis gallinae* & "Blackhead" in fowl 173d.
- , experimental infections 89c.
- , life-history 449a.
- *papillosa* transmitting "Blackhead" 528b.
- Heterobranchus bidorsalis*, *Marsypocephalus* n. sp. in 352a.
- , *Polyonchobothrium* n. sp. in 352a.
- Heterodera marioni* 377a.
- , bionomics 111c, 179a.
- , chemical control 88c.
- , control 142a, 179b.
- , with fungi 54c.
- in dahlias, varietal immunity 46b.
- disease, host records 200a.
- in pineapple 126a.
- tobacco 646b.
- , feeding methods 214a.
- in *Ormithogalum saundersiae* 47o.
- tobacco 46a, 46c.
- U.S.A. 216a.
- vine 610a.
- *schachtii* in Britain 251a.

INDEX OF SUBJECTS.

- Heterodera schachtii*, chemical control 29a, 29b, 217g.
 —, control 329a, 394b.
 —, disease in potato 160a.
 —, —, —, aetiology 29c.
 —, distinct strains 496a.
 —, larvae, bionomics 111b.
 —, in potato 230a.
 —, —, —, chemical control 107c, 111d.
 —, —, —, control with maize 111a.
Heterodiplostomum lanceolatum n. g., n. sp. 479a.
Heterodontus philippi, *Acanthobothrium* n. sp. in 607a.
Heterophyes heterophyes, life-history 711.
 Heterophyidiasis in man 594c.
Heterotrax vigorsi, *Hatertia gallinarum* in 536a.
Heterotylenchus aberrans n. g., n. sp. in *Hylemyia antiqua*, life-history 66a.
Heteroxynema vlakhaasi n. sp. in *Lepus capensis* 585d.
Hexacotyle dissimilis n. sp. 159.
Hexangitrema pomacanthi n. g., n. sp. 732db.
Himasthla quissetensis, life-history 732ee.
Hirudinella beebei n. sp. in *Acanthocybium petus* 237d.
Holconotus rhodoterus, *Gemitocotyle* n. g., n. sp. in 60c.
Holochilus balnearum, nematodes in 207e.
 Hookworm, see also *Ancylostoma*, *Necator*.
 —, anaemia 117a, 253a, 500a, 514a, 517a, 620a.
 —, in dog 162a.
 —, & malaria 224j.
 —, in man 30b, 101a, 198c.
 —, & pregnancy 309a.
 —, treatment 63a.
 —, in dog, hexylresorcinol 210a.
 —, man in Russia, control 732cg.
 —, Merino sheep 23a.
 —, ova, technique for concentrating 629a.
 —, —, —, estimating 188c.
 —, sheep, attached to cestode 42a.
 Hookworms, fecundity 198d.
 "Hoose" in cattle 240e.
 —, chenopodium oil 389b, 389c.
 —, treatment 389d.
Hoplolaimus bradys disease in yam 214b.
Hoplopterus armatus, *Gyrocoelia* n. sp. in 585d.
 Horse, ascarid in 229a.
 —, ascariasis in 367a.
 —, *Caballonema* n. g., n. sp. in 732a.
 —, *Dictyocaulus* in 732h, 732bx.
 —, *Filaria oculi* in 192b.
 —, habronemiasis in 643a.
 Horse, helminthiasis in 184c, 498a, 713, 732eh.
 —, helminths in 23b, 474a, 532a, 656a, 705, 732bb, 732cp.
 —, microfilariae in 653a.
 —, nematodes in 174a, 732bo.
 —, — & colic in 141a.
 —, *Onchocerca cervicalis* in 604c.
 —, *Parafilaria* in 732cd.
 —, parasitic enteritis in 672a.
 —, strongyle larvae, chemical control 196d.
 —, strongyles in 732dg.
 —, *Strongyloides westeri* in 235a.
 —, strongylosis in 21a, 174c, 673b.
 —, *Strongylus* in 146a.
 —, *Thelazia lachrymalis* in 240d.
 Host-list, Digenea in selachian fishes 74d.
 —, plant nematodes 215a.
 "Husk" in ruminants, treatment 672c.
Hyaena crocuta, helminths in 261c.
Hyborynchus notatus, trematodes in 413b.
 Hydatid antigen, preparation of 32d.
 —, purification 599a.
 —, bionomics 579b, 732cr.
 —, in sheep, immunity 32c.
 —, — Syria 609f.
 Hydatidosis 44a, 291a, 482c.
 —, alveolar, in man 271a, 288a.
 —, in Australasia 209a.
 —, — cattle 242b.
 —, — Friesland 236a.
 —, — man 39b, 39c, 55a, 85a, 102a, 104a, 110a, 118c, 127a, 128a, 133g, 191a, 224g, 241a, 245a, 245b, 262a, 262b, 268a, 270a, 270b, 270c, 270d, 275a, 277a, 278a, 278b, 282a, 292a, 303b, 328a, 344a, 347a, 347d, 347e, 348a, 348b, 363a, 370a, 373a, 382a, 386a, 391a, 395a, 415a, 416a, 421b, 422a, 431a, 433a, 435a, 436a, 439a, 440a, 445a, 446a, 446b, 446c, 446d, 450a, 452a, 458a, 458b, 458c, 458d, 458e, 458f, 458g, 458h, 458i, 462a, 472b, 486a, 486b, 487a, 499a, 500b, 500c, 510a, 512a, 513a, 538a, 543b, 556a, 558a, 558b, 565a, 567a, 583a, 589a, 596a, 601a, 609b, 609c, 609d, 620b, 620c, 621a, 624a, 626a, 632a, 633a, 634a, 634b, 640a, 640b, 640c, 647b, 663a, 667a, 668a, 669a, 682a, 686a.
 —, —, —, in Iceland 609e.
 —, —, —, North America 1e.
 —, —, reviewed 658a.
 —, — New Zealand 579a.
 —, — rabbit 19a, 19b.
Hydrochoerus isthmus, *Habronema* n. sp. in 217 l.
Hyla borea, *Sphaerostoma bramae* in 92d.

INDEX OF SUBJECTS.

Hylemyia antiqua, *Heterotylenchus* n. g., n. sp. in 66a.
Hymenolepis spp. in Insectivora, listed 642a.
 — *coronoidis* n. sp. 343a.
 — *diminuta*, life-history 139b, 294a.
 — ova, hatching 139a.
 — *gracilis* in swan 263b.
 — *kerivoulæ* n. sp. 642a.
 — *lanceolata* in goose, *Arecolin* 732dh.
 — *nana* anaemia in man 139d.
 — — & *Endamoeba histolytica* 49a.
 — — in U.S.A. rh.
 — *picnototi* n. sp. 343a.
 Hyostromylosis in pig 375a.
 Hyphomycetes destroying nematodes 571a.
Hypocreadium symmetorchis n. g., n. sp. 732cv.
Hypoprion brevirostris, *Platybothrium hypoprioni* in 217p.
Hyracofilaria hyracis n. g., n. sp. in *Hyrax* sp. 585d.
Hyrax sp., *Hyracofilaria* n. g., n. sp. in 585d.
Hysterolecitha n. sp. 604b.
 Iceland, hydatidosis 609e.
Ictaliurus punctatus, 2nd intermediary for *Apophallus venustus* 287b.
Iguana tuberculata, *Breinlia* n. sp. in 74b.
 — —, *Pulchrosomoides* n. g., n. sp. in 207b.
 Immunity, *Ancylostoma caninum* 322j.
 —, *Anguillulina dipsaci* 318c.
 —, *Capillaria hepatica* 322j.
 —, cercariae 322g.
 —, cestodes 655b.
 —, *Cooperia curticei* 322j.
 —, *Cysticercus bovis* 29e.
 —, — *pisiformis* 408a.
 —, *Diphyllbothrium latum* 257g.
 —, *Dirofilaria immitis* 698.
 —, domestic animal helminths 673a.
 —, *Epibdella melleni* 687b.
 —, equine strongyles 1c.
 —, general account 89a.
 —, helminths 162e, 322j.
 —, *Heterodera marioni* 46b.
 —, hydatid 32c.
 —, nematode infections 707.
 —, *Nippostrongylus* 162d.
 —, — *muris* 54a, 322j.
 —, *Ostertagia circumcincta* 522a.
 —, *Parorchis acanthus* 322j.
 —, *Railletina cesticillus* 322j.
 —, *Sparganum mansonioides* 322j.
 —, *Strongyloides ratti* 1b, 162g.
 —, *Trichinella* 140b, 167i, 322j.
 —, — *spiralis* 37a.
 Immunology, *Ascaris* 119a.
 —, — extracts 78a.

Immunology, *Cysticercus cellulosae* 519a.
 —, *Diphyllbothrium erinacei* 98a.
 —, *Dirofilaria immitis* 322j.
 —, *Enterobius* 322j.
 —, helminths 199a, 544c.
 —, horse helminths 705.
 —, hydatid 32d, 599a.
 —, liver-fluke 396a.
 —, *Nippostrongylus muris* 322j.
 —, pig helminths 730.
 —, skin reactions 119b.
 —, *Trichinella* 243a, 612b.
 —, — *spiralis* 519a.
 —, trichinelliasis 121a.
 Incidence, ancylostomiasis 254b, 399.
 —, *Diphyllbothrium latum* 322g.
 —, enterobiasis 353a, 550a.
 —, filariasis 284b.
 —, — bancrofti 97a, 97b.
 —, helminths 132a.
 —, human helminthiasis 90g.
 —, hydatidosis 579a.
 —, rabbit helminths 58a.
 —, schistosomiasis 71b, 115c.
 —, trichinelliasis 118a, 131a, 131b, 255a, 279a.
 —, *Trichuris trichiura* 732o.
 India, ancylostomiasis 399.
 —, bird microfilariæ 699.
 —, — strigeids 606b.
 —, canine schistosomiasis 190b.
 —, *Cysticercus cellulosae* 189a.
 —, dracontiasis 311a.
 —, filariasis 102b.
 —, fowl trematode 604c.
 —, gape-worm 604c.
 —, gnathostomiasis 311c.
 —, helminthology 604a.
 —, "Kumri" 310a.
 —, liver-fluke disease 604c.
 —, *Onchocerca cervicalis* 604c.
 —, *Paragonimus westermani* 604b.
 —, schistosome intermediaries 700.
 —, schistosomiasis 604c, 732j.
 —, sheep & goat cestodes 604b.
 —, *Taenia solium* 189a.
 Indo-China, filariasis 284b.
 —, human filariasis 178b, 420a.
 —, — helminthiasis 178a.
 —, — helminths 284c.
Indoderogenes purii n. g., n. sp. 604b.
 Insect & nematode associations 66a.
 Insectivora, *Hymenolepis* spp. in 642a.
 Insects, aquatic, 2nd intermediaries for *Plagiorchis* spp. 114h.
 —, intermediaries for *Cheilospirura hamulosa* 182a.
 —, — *Choanotaenia infundibulum* 322a.
 —, — *Tropisurus fissispinus* 528d.
 Invertebrates, 2nd intermediaries for *Asymphylogora tincae* 92d.
 —, — — *Lepocreadium album* 135a.

INDEX OF SUBJECTS.

- Ipomaea batatas*, *Anguillulina dipsaci* disease in 126c.
Iris, bulbous, *Anguillulina dipsaci* in 88b.
Ironus intermedius n. sp. 725.
 Italy, ancylostomiasis 168a, 269b.
 —, filariasis 586a.
 —, — conjunctivae 135e.
 —, human trichinelliasis 616a.
 —, *Necator americanus* 332a.
 —, rat & mouse helminths 259a.
- Japan, *Capillaria bovis* 528c.
 —, clonorchiasis 187a.
 —, liver-fluke disease 124a.
 —, trematode larvae 312a.
 —, *Trichostrongylus axei* 528a.
- Kakatoë sulphurea*, *Dicrocoelium* n. sp. in 322c.
Kaurma longicirra redescribed 158.
 — *orientalis* n. sp. in *Amyda japonica* 312c.
Ketupa zelonensis, *Diplostomum* n. sp. in 349a.
Kowalewskiella buzzardia n. sp. 343a.
 "Kumri" in India 310a.
- Labrax lupus*, *Dolichoenterum* n. sp. in 91a.
Lacerta vivipara, *Oswaldocruzia* n. sp. in 732ej.
Laimaphelenchus moro n. g., n. sp. 398a.
Larus argentatus, *Ornithobilharzia* n. sp. in 322b.
 —, —, *Parorchis acanthus* in 322j.
 — *ridibundus*, *Philophthalmus* n. sp. in 732x.
 —, —, *Remicola* n. sp. in 732dm.
Lechiorchis secundus n. sp. in *Natrix sipedon* 322c.
Lecithocladium revised 604b.
 — n. spp. 604b.
Lecithodendrium revised 283a.
 — *ascitia* to *Prosthodendrium* 283a.
Leiperacanthidae n. fam. 352b.
Leiperacanthus gallinarum n. g., n. sp. in fowl 352b.
Lepidogrammus cumingi, *Chandlerella* n. sp. in 594e.
Lepocreadioides branchiostegi n. sp. 157.
Lepocreadium album in fishes, life-history 135a.
Lepoderma bulbui n. sp. 244a.
 — *casarcii* n. sp. 244a.
 — *ferruginum* n. sp. 244a.
Lepodermatidae monographed 244a.
Lepomis symmetricus, *Actinocleidus* n. sp. in 199 l.
Leptobothrium nom. nov. for *Pseudobothrium* Gallien 167e.
Leptocreadium skrjabini n. g., n. sp. 732cv.
 — *vitellusum* n. sp. 732cv.
- Lepus capensis*, *Heteroxyndema* n. sp. in 585d.
Leucochloridium sp. in snail in Germany 573a.
Leucorrhina intacta, 2nd intermediary for *Alloglossidium corti* 199e.
Levinsemiella indica, reproduction 604b.
 Libya, ancylostomiasis 269f.
 —, schistosomiasis 269e.
 —, — *haematobia* 306a.
Libyostongylus magnus n. sp. in *Struthio camelus* 732bc.
 Life-history, *Acanthocephala* 732em.
 —, *Aelurostrongylus abstrusus* 732bl.
 —, *Allocreadium angusticolle* 293a.
 —, *Alloglossidium corti* 199e.
 —, *Anoplocephalinae* 322j.
 —, *Apophallus venustus* 16b, 287b.
 —, *Asymphyllodora tincae* 92d.
 —, *Bothriocephalus rarus* 114b.
 —, *Brachylaemus suis* 18a, 80a.
 —, *Capillaria columbae* 322j.
 —, *Choanotaenia infundibulum* 322a.
 —, *Coitocaecum* sp. 213a.
 —, *Contracecum aduncum* 471a, 471b, 489a.
 —, — *spiculigerum* 199j, 322j.
 —, *Cotylophoron cotylophorum* 604c.
 —, *Crepidostomum cornutum* 114e, 143b.
 —, *Dactylogyrus macracanthus* 503b.
 —, *Dasyatra villicaeca* 351a.
 —, *Deropristis inflata* 92d.
 —, *Dicrocoelium dendriticum* 69d, 600a, 652a, 732dj.
 —, *Digenea* 322j.
 —, *Diphyllobothrium mansonoides* 217o, 322g.
 —, *Dipylidium* spp. 393b.
 —, *Dirofilaria immitis* 87d, 87g, 92b.
 —, *Dolichoenterum* n. sp. 91a.
 —, *Echinostoma revolutum* 99a.
 —, *Eustoma chelydrae* 217r.
 —, *Exorchis oviformis* 508a.
 —, *Fasciolopsis buski* 257a.
 —, *Filaroides falciformis* 371a.
 —, frog trematode 322j.
 —, *Gaigeria pachyscelis* 340a.
 —, *Glyptelminis queta* 368a.
 —, *Gnathostoma spinigerum* 32q.
 —, *Gorgodera amplicava* 453a.
 —, *Graphidium strigosum* 93c, 371b.
 —, *Haplometrana* n. sp. 32a.
 —, *Heterakis gallinae* 449a.
 —, *Heterophyes heterophyes* 711.
 —, *Heterotylenchus* n. g., n. sp. 66a.
 —, *Himasthla quissetensis* 732ee.
 —, *Hymenolepis diminuta* 139b, 294a.
 —, *Lepocreadium album* 135a.
 —, *Ligula intestinalis* 503a.
 —, liver-fluke 65a.
 —, *Loxogenes liberum* 199k, 425a.
 —, *Macracanthorhynchus hirudinaceus* 397a.
 —, *Macravestibulum* n. sp. 378a.

INDEX OF SUBJECTS.

- Life-history, *Mermis subnigrescens* 313a.
 —, *Mesocostoides lineatus* 604c.
 —, *Mesometra orbicularis* 135b.
 —, *Metorchis* n. sp. 69c.
 —, *Microphallus* sp. 213a.
 —, *Moniezia expansa* 229b.
 —, *Multicaecum tenuicollis* 114o.
 —, *Neoechinorhynchus cylindricus* 322j.
 —, *Onchocerca* 5a.
 —, — *gutturosa* 125a.
 —, *Ophidascaris labiatopapillosa* 114o.
 —, *Opisthorchis felineus* 70a.
 —, *Parafasciolopsis fasciolaemorpha* 489b, 559a.
 —, *Paragonimus* 3d.
 —, — *westermanni* 651a.
 —, *Physaloptera turgida* 732d.
 —, *Plagiorchis micracanthos* 114h.
 —, — *muris* 114h.
 —, — *proximus* 114h.
 —, *Polymorphys minutus* 463a.
 —, *Prosthogonimus* sp. 432a.
 —, *Raillietina cesticius* 293b.
 —, — *echinobothrida* 293b.
 —, *Raphidascaris canadensis* 322j.
 —, *Renifer amiarum* 351a.
 —, schistosome 36c.
 —, sparganum 97c.
 —, *Sphaeridiotrema globulus* 244c.
 —, *Strongyloides stercoralis* 732z.
 —, *Syngamus trachea* 60d.
 —, *Synthetocaulus capillaris* 257b.
 —, — *kochi* 732r.
 —, *Taenia saginata* 118d.
 —, *Tetrameres americana* 47h.
 —, *Triaenophorus crassus* 114 l.
 —, *Trichinella* 70b.
 —, *Tropisurus fissipinus* 528d, 535a.
 —, *Wuchereria bancrofti* 57a, 61a, 97e.
Ligula intestinalis, life-history 503a.
Limax sp., intermediary for *Synthetocaulus kochi* 732r.
Limnaea natalensis controlled by ducks 646a.
 — *palustris*, *Cercaria* spp. in 135c.
 — *philippinensis*, bionomics 593b.
 — *truncatula*, bionomics 381a.
 — — in Yugoslavia, bionomics 542a.
Limnotragus speketi, *Schistosoma bovis* in 257e.
Limosa fedoa, schistosome in 114m.
 Lion, *Echinococcus* n. sp. in 585d.
 Lithuania, *Eucoleus aerophilus* 670a.
 Liver-fluke, see also *Dicrocoelium*, *Fasciola*.
 — disease, control 530a.
 — — in India 604c.
 — — — man 456a, 627a.
 — — — — in Japan 124a.
 — — — —, thymol 548c.
 — — — sheep, treatment 524a.
 — in goat 108a.
 —, life-history 65a.
 — ova, technique for flotation 402.
 Liver-fluke, precipitation test 396a.
 Loaiasis, "Anthiomaline" 635b.
Longidorus georgiensis n. sp. 152a.
Longistriata argentina n. sp. 207e.
 — *fortuita* n. sp. 207e.
 — *nihoi* n. sp. in *Tolyteutes matabo* 224f.
Lota vulgaris, *Acanthocephala* spp. in 237e.
Loxogenes liberum, life-history 199k, 425a.
 Lung-fluke, see *Paragonimus*.
 Lungworm disease & avitaminosis in sheep 581a.
 — — in domestic animals 252a.
 — — — sheep, "Antimosan" 542b.
 Lungworms in wild animals in Germany 400.
 Lymphangitis, filarial 572a.
 —, streptococcal, in Guadeloupe 285b.
 —, treatment 285c.
 —, tropical 480b.
Lynx rufus, *Diphyllobothrium mansonioides* in 114t.
 Macracanthorhynchus *hiradinaceus*, embryology 397a.
Macravestibulum eversum n. sp. in *Graptemys geographica*, life-history 378a.
Macroderoides to *Plagiorchiinae* 237a.
Macroderoididae n. fam. 1141.
Macropteryx longipennis, *Anomotaenia* n. sp. in 642a.
 — —, *Paruterina* n. spp. in 642a.
Macrosclides proboscideus, *Dubioxyuris* n. g., n. sp. in 585d.
Macrurus laevis, *Dichidophoropsis* n. g., n. sp. in 3c.
Maculifer to *Opisthobolidae* 534a.
 Madagascar, *Clonorchiasis sinensis* 15d.
 —, *Schistosomiasis haematobia* 87c, 285d.
 Malay, stephanofilariasis 318f.
 Mammals, cestodes in 480c.
 —, nematodes in 341a.
 Man, *Ancylostoma braziliense* in 24a, 164a.
 —, — *duodenale* in 716.
 —, ancylostomiasis in 55b, 72a, 81a, 86a, 86b, 86c, 168a, 181a, 205a, 254a, 254b, 254c, 269a, 269b, 269f, 305a, 399, 418a, 418b, 419a, 423c, 423d, 480d, 504b, 521b, 566a, 590a, 602a, 617a, 732et.
 —, ascariasis in 134a, 177a, 362c, 390b, 424a, 431b, 473b, 484a, 506a, 511b, 521a, 628a, 631a, 677a.
 —, *Ascaris* in 90d, 90f, 90h, 119a.
 —, — larvae in 438a.
 —, — *lumbricoides* in 444a, 548a.
 —, cestode disease in 544b.
 —, cestodes in 163a, 327a, 600c.

INDEX OF SUBJECTS.

Man, clonorchiasis in 171a, 187a.

- , *Clonorchis sinensis* in 9a.
- , cysticerciasis in 48c, 84a, 90e, 117b, 117c, 185a, 224e, 280a, 298a, 347b, 511a, 515a, 543a, 557a, 577a, 598a, 600b, 639b, 647a.
- , — & epilepsy in 202b.
- , — cellulosa in 580b, 679a.
- , *Cysticercus bovis* in 732dn.
- , — cellulosa in 189a.
- , *Diphyllbothrium* in 228a.
- , — n. spp. in 732dp.
- , — latum in 47n, 554a.
- , dracontiasis in 303a.
- , elephantiasis in 304b, 362a, 362b, 483a, 523a.
- , enterobiasis in 206b, 322j, 353a, 550a, 613a.
- , *Enterobius* in 202a, 269d.
- , — & appendicitis in 347c.
- , *Fasciola gigantica* in 732bt.
- , — *hepatica* in 33a.
- , Fascioliasis *hepatica* in 92a, 92c.
- , fasciolopsiasis in 90i.
- , filariasis in 102b, 178b, 188a, 232a, 266a, 284b, 290a, 290b, 303a, 304g, 420a, 473a.
- , — & lymphangitis in 326a.
- , — bancrofti in 15a, 36e.
- , — conjunctivae in 135e.
- , — perstans in 4a.
- , filariid in 475a.
- , Filarioidea in 43a.
- , gnathostomiasis in 311c.
- , helminthiasis in 8a, 90g, 178a, 223a, 224j, 321a, 323a, 335a, 342a, 416b, 504a, 641a, 655a, 692, 712.
- , — & pregnancy in 138a.
- , helminths in 17a, 17c, 28a, 34a, 40a, 114c, 132a, 133d, 165b, 224c, 226a, 247, 258a, 276a, 284c, 289a, 304d, 331a, 341b, 358a, 360a, 527a, 549a, 552a, 552c, 552d, 552e, 569a, 625a, 625b, 629b, 629c, 629d, 662a, 716.
- , — & epilepsy in 567b.
- , heterophyidiiasis in 594c.
- , hookworm in 732cg.
- , — anaemia in 30b, 101a, 198c.
- , hydatidosis in 1e, 39b, 39c, 55a, 85a, 102a, 104a, 110a, 118c, 127a, 128a, 133g, 191a, 224g, 241a, 245a, 245b, 262a, 262b, 268a, 270a, 270b, 270c, 270d, 271a, 275a, 277a, 278a, 278b, 282a, 288a, 292a, 303b, 328a, 344a, 347a, 347d, 347e, 348a, 348b, 363a, 370a, 373a, 382a, 386a, 391a, 395a, 415a, 416a, 421b, 422a, 431a, 433a, 435a, 436a, 439a, 440a, 445a, 446a, 446b, 446c, 446d, 450a, 452a, 458a, 458b, 458c, 458d, 458e, 458f, 458g, 458h, 458i, 462a, 472b, 486a, 486b, 487a, 499a, 500b, 500c, 510a, 512a, 513a, 538a, 543b, 556a, 558a,

Man, hydatidosis in—*continued*.

- 558b, 565a, 567a, 583a, 589a, 596a, 601a, 609b, 609c, 609d, 609e, 620b, 620c, 621a, 624a, 626a, 632a, 633a, 634a, 634b, 640a, 640b, 640c, 647b, 658a, 663a, 667a, 668a, 669a, 682a, 686a.
- , *Hymenolepis nana* in 139d.
- , liver-fluke disease in 124a, 456a, 548c, 627a.
- , *Microfilaria malayi* in 97d.
- , *Moniezia* sp. in 552i.
- , *Monorchotrema* infection in 324a.
- , *Necator americanus* in 120a.
- , nematodes in 36a, 325a, 350a, 383b.
- , ocular filariasis in 437b, 669b.
- , *Onchocerca volvulus* (?) in 19c.
- , onchocerciasis in 61b, 421a, 555b, 555c, 555d.
- , opisthorchiasis in 290c, 677c.
- , *Opisthorchis felinus* in 257d.
- , paragonimiasis in 2b, 307a.
- , *Plagiorchis* sp. in 732c.
- , — *muris* in 32p.
- , *Rhabditis pellio* in 256a.
- , schistosomiasis in 4b, 4c, 36b, 36d, 48b, 71b, 81c, 115c, 117d, 136a, 144a, 201a, 266c, 266d, 269e, 285e, 316b, 316c, 318b, 385a, 509a, 531b, 548d, 553a.
- , — haematobia in 81b, 87c, 145a.
- , — japonica in 9b.
- , sparganosis in 723.
- , sparganum in 97c.
- , *Strongyloides stercoralis* in 304f.
- , strongyloidiasis in 61c, 68a, 544a, 677b.
- , *Taenia* in 267a, 359a.
- , — *saginata* in 29f, 114s, 390a.
- , — *solium* in 189a.
- , Taeniasis *saginata* in 118b, 685a.
- , *Thelazia* spp. in 384a.
- , trichinelliasis in 1d, 30a, 53a, 118a, 131a, 131b, 131c, 172a, 193a, 222a, 255a, 260a, 269c, 279a, 279b, 317a, 370b, 383a, 616a, 659a, 659b, 672e.
- , *Trichostrongylus axei* in 341b.
- , trichuriasis in 443a, 457a, 556b, 637a.
- , Trichuris in 548b.
- Mansonina uniformis*, bionomics 304a.
- Mansonioides annulifera*, bionomics 311d.
- Mareca americana*, *Amidostomum anseris* in 105d.
- Maritrema*, excretory system 6a.
- Marsypiocephalus daveyi* n. sp. in *Heterobranchius bidorsalis* 352a.
- Mastacembalus armatus*, *Opeogaster* n. spp. in 603d.
- Mastomys erythroleucus*, *Cysticercus fasciolaris* in 76b.
- Mauritius, human helminths 341b.

INDEX OF SUBJECTS.

- Mauritius, *Trichostrongylus axei* 341b.
 —, *Wuchereria bancrofti* 61a.
Mazocraes sagittatum n. comb. in brown trout 263b.
 Meat inspection in Cuba 133e.
 — — & *cysticercus* 612a.
 — — in Germany 83a.
 Mediterranean, fish trematodes 281a.
Megacustis to *Plagiorchiinae* 237a.
Megalodiscus to *Diplodiscus* 170a.
Mehracola ovocaudatum n. g., n. sp. 604c.
Melanonyx fabalis, *Notocotylus* n. sp. in 591e.
Mermis subnigrescens in grasshoppers, life-history 313a.
 Mermithid in *Vespa vulgaris* 300a, 608a.
Mesocestoides lineatus, life-history 604c.
Mesodiplostomum gladiolum n. g., n. sp. 479a.
Mesometra orbicularis in *Boops salpa*, life-history 135b.
 Metabolism, *Ascaris lumbricoides* 114u.
Metabronema caranxi n. sp. in *Caranx speciosus* 594d.
 Metacercariae, technique for excysting 368b.
Metachirops opossum, *Gongylonemoides marsupialis* in 207i.
 — —, *Viannia* n. sp. in 732ca.
Metachirus nudicaudatus, *Physaloptera* n. sp. in 207g.
 — —, *Travassostongylus* n. spp. in 207f.
 Metastrongyles in pig 732dy.
 — — — in Russia 732dv.
 — —, technique for diagnosing 732bg.
 Metastrongylosis in sheep, "Dictyolin" 161a.
Metastrongylus in guinea-pig, haematology 32f.
 — spp. in pig in Britain 369a.
Metorchis albidus in dog in U.S.A. 60f.
 — *intermedius* n. sp. in duck, life-history 69c.
 Mexico, human helminths 165b, 358a.
 —, *Rhabditis pellio* 256a.
Microcotyle branchiostegi n. sp. 157.
 — *cepolae* n. sp. 159.
 — *sebastis* in *Sebastodes* spp. 114k.
 — *spari* n. sp. 159.
Microfilaria bancrofti, bionomics 376a.
 — — concentrated by *Culex fatigans* 115a.
 — *immitis*, culture of 294c.
 — — in dog 196e.
 — *loxodontis* n. sp. in African elephant 74c.
 — *malayi*, control 304a, 311d.
 — —, development in *Anopheles hyrcanus* 732bz.
 — — in man in Dutch East Indies 97d.
 — — mosquitoes in Dutch East Indies 188b.
 Microfilariae in birds in India 699.
 — — *Culex pipiens*, experimental infections 591c.
 — — — —, incidence 203f.
 — — — — horse in Sweden 653a.
 "Microfilarium limai n. sp." 603h.
 Microphallinae, systematics 6a.
Microphallus sp., life-history 213a.
Micropogon undulatus, *Capillaria* n. sp. in 207j.
Microrchis to *Chiorchis* 170a.
Milvus lineatus, *Contracaecum* n. sp. in 732br.
 Mink, *Diocotylus renale* in 105b.
 —, *Paragonimus westermani* in 105c.
 —, trematode disease in 497c.
Minuthorchis to *Pachytrema* 263e.
Mola mola, *Accacaladium* n. sp. in 60a.
Molineus asiaticus n. sp. in *Paradoxurus philippinensis* 594d.
 Molluscs, intermediaries for *Filaroides falciformis* 371a.
 — — — *Himastha quissetensis* 732ee.
 — — — *Schistosoma*, bionomics 1i.
 — — — — in Belgian Congo 19d.
 —, 1st intermediaries for *Lepocreadium album* 135a.
 —, 2nd intermediaries for *Eustoma chelydrae* 217r.
Moniezia in sheep in Russia 732cx.
 — sp. in man 552i.
 — *expansa*, bionomics 162c, 732cq.
 — — in cattle 47m.
 — —, life-history 229b.
 — —, maturity 727.
 — —, physiology 89e.
 — — in sheep, bionomics 322j.
 — — — — in Russia 732eu.
Monodermis torpedinis n. g., n. sp. in *Narcacion torpedo* 74d.
Monodontella okapiae n. sp. in okapi 52a.
Monodontus redefined 207h.
 — *aguiari* n. sp. in *Dasyprocta agouti* 207h.
 — *nefastus* n. sp. in *Tapirus americanus* 207h.
 Monogenea in fishes 159.
 — — — in Pacific 322j.
 — monographed 37b.
 Monogenoidea reclassified 465a.
 Monogenoidei n. subclass 465a.
Monorchotrema infection in man in Philippine Islands 324a.
Monorygma magnum n. comb. for *Phyllobothrium magnum* 650c.
 — *macquariae* n. sp. 650c.
 Moose, helminthiasis in 184b.
 Morocco, *Schistosomiasis haematobia* 285a.
 Mouse, *Capillaria hepatica* in 322j.
 —, helminths in 259a.
 —, *Strongyloides ratti* in 32i.
 —, *Trichuris muris* in 552b.

INDEX OF SUBJECTS.

Mugil spp., *Haplospilanchnus pachysomus* in 92d.
 — *cephalus*, *Neoechinorhynchus* n. sp. in 356a.
Mule, *Setaria equina* in 636a.
Multicaecum acuticauda n. sp. in *Caiman niger* 333a.
 — *tenicolle*, life-history 114o.
Multivitellaria to *Pachytrema* 263e.
 Murines, nematodes in 476a.
Mus sp., *Protospirura* n. sp. in 70c.
 — —, *Rictularia* n. sp. in 70c.
Musca vicina, *Allantonema* n. sp. in 263c, 263d.
Myonax sanguineus, *Filaroides* n. sp. in 644a.
Myxas ampulla, intermediary for *Fasciola hepatica* 578a.
 Nachtigal, Gustav, biography 266b.
Narcacion torpedo, *Monodharmis* n. g., n. sp. in 74d.
Narcissus, *Anguillulina dipsaci* in 14a.
 —, *Eucephalobus teres* in 217d.
Natriodera n. g. 244a.
Natrix, *Sparganum* spp. in 137a.
 — sp., 2nd intermediaries for *Diphyllobothrium mansonoides* 217o.
 — *sipidon*, *Lechriorchis* n. sp. in 322c.
 — —, *Sparganum* n. sp. in 54b.
Necator, see also Hookworm.
 — *americanus*, egg output 357a.
 — — in Italy 332a.
 — — — Puerto Rico 120a.
Nectomys squamipes, *Syphacia* n. sp. in 563b.
Neidhartia ghardagae n. sp. 354a.
 — *neidharti* n. g., n. sp. 354a.
 Nematoda reclassified 732n.
 Nematode in cat in India 604c.
 —, dermal, in horse 174a.
 — disease in pigeon 147a.
 — in eye of man 350a.
 — infections, immunity 707.
 — & insect associations 66a.
 — larvae, separation from free-living species 217e.
 — in man 36a.
 Nematodes from Afghanistan 603i.
 — — Angola 70c.
 — in animals, biology 155.
 — from Antarctic 650d.
 — in aquatic plants 430a.
 — bark beetles 398a.
 — from Belgian Congo 249.
 — in buffalo 203b.
 — — *Caviella australis* 207e.
 — & colic in horse 141a.
 — in *Coracias garrula* 732bi.
 — & "damping off" in cotton 126b.
 — destroyed by *Dactylella bembicodes* 526a.
 — — — *Hyphomycetes* 571a.

Nematodes in domestic animals in Burma, check-list 190a.
 —, free-living 47a, 47b, 47c.
 —, —, 1 n. g., 23 n. spp. 7a.
 —, —, in mosses 213b.
 —, —, —, 3 n. spp. 246a.
 —, —, — Poland 725.
 — in *Galea leucoblephara* 207e.
 — — *Holochilus balnearum* 207e.
 — — horse, chemotherapy 732bo.
 — — mammals in China 341a.
 — — man 383b.
 — — —, various anthelmintics 325a.
 —, marine, 1 n. g., 10 n. spp. 217h.
 —, —, from Norway 584a.
 —, monographed 722.
 — in mosses in Hungary 409a.
 — — murines, pathology 476a.
 — — okapi 644b.
 — — *Onchorhynchus* 459b.
 —, physiology 337a.
 —, plant, in Denmark 234a.
 —, —, feeding methods 217a.
 —, —, host-lists 215a.
 —, —, survival 217f.
 —, —, technique for staining 196b.
 —, predatory on others 54d.
 —, relationship of free-living & parasitic 732dx.
 — in ruminants, 1st stage larvae 732ct.
 —, saprophagus 732be.
 — in sheep in British Guiana 62a.
 — — —, location 208a.
 — — silver fox, "Sprehn's capsules" 732f.
 — — —, tetrachlorethylene 732f.
 —, text-book 153.
 — in tomato in Russia 152a.
 — — *Viola lutea* 582a.
 — — wild animals 481a.
 Nematodirus disease in sheep 173a.
 — *arizonensis* n. sp. in rabbit 217n.
 — *neomexicanus* n. sp. in rabbit 217n.
Nematoparataenia southwelli redescribed 701.
Nematophila to *Chiorchis* 170a.
Neoalectana affinis n. sp. in *Bibio* spp. & *Dilophus vulgaris* 66a.
 — *bibionis* n. sp. in *Bibio* spp. & *Dilophus vulgaris* 66a.
Neocladorchis poonaensis n. g., n. sp. in *Barbus dobsomi* 111e.
Neodiplostomum infection in fishes 264a.
 — spp. redescribed 167b.
 — *gavialis* to *Crocodylicola* 261d.
 — *larai* n. sp. in *Bubulcus ibis* 594a.
Neoechinorhynchus chilkaensis n. sp. in *Mugil cephalus* 356a.
 — *cylindricus*, life-history 322j.
 — *topseyi* n. sp. in *Polynemus heptadactylus* 212b.
Neogoezia magna n. g., n. sp. in *Salmo fario* 396b.
Neolepoderma n. g., 244a.

INDEX OF SUBJECTS.

- Neoplasms & helminths 365a.
Nereis dumerilli, intermediary for *Deropristis inflata* ? 92d.
Neritina fluviatilis, 1st intermediary for *Allocreadium angusticolle* 293a.
Nettion crecca, *Chinhuta* n. g., n. sp. in 603j.
—, *Cotylurus orientalis* in 603f.
New Guinea, Filariasis bancrofti 97a, 97b.
— Zealand, *Aphelenchoides ribes* 339a.
—, *Fasciola hepatica* 578a.
—, hydatidosis 579a.
Nippostrongylus in rat, immunity 162d.
— *muris*, immunology 322j.
— — ova, viability 322h.
— — in rat, immunity 54a, 322j.
Nomenclature, helminthological 459a.
North America, *Echinostoma paraulum* 89b.
—, *Gyrodactyloidea* 413a.
—, human hydatidosis 1e.
—, *Ruzgumiella* n. sp. 114q.
Norway, strongyloidiasis 122a.
Notocotylus, key to spp. 591e.
— *anatis* n. sp. in *Anas domestica* 591e.
— *orientalis* n. sp. in *Melanonyx fabalis* 591e.
Numida mitrata, *Subulura* n. sp. in 585d.
Nutria, helminths in 648b.
—, strongyloidiasis in 648a.
Nycticeius humeralis, *Allintoshius* n. g., n. sp. in 47e.
Nycticorax nycticorax, *Dendrouterina* n. sp. in 47 l.
Nyroca affinis, *Ruzgumiella* n. sp. in 114q.
Octangioides skrjabini n. g., n. sp. 732db.
Octoplectanocotyla trichiuri n. g., n. sp. 159.
Odocoileus columbianus, *Elaphostrongylus odocoilei* in 732bm.
— *hemionus*, *Cysticercus tenuicollis* in 212d.
Odontobutis obscura, *Phyllodistomum* n. sp. in 203c.
Oesophagostomiasis 173c.
Oesophagostominae, key to genera 732by.
Oesophagostomum columbianum in sheep, enema treatment 451a.
— — —, treatment 195a.
— *goodeyi*, male described 76a.
— *radiatum* nodules 487c.
Okapi, *Monodontella* n. sp. in 52a.
—, nematodes in 644b.
—, *Syngamus* n. sp. in 52a.
Okapistrongylus epuluensis n. g., n. sp. 644c.
Omeia papillocauda n. sp. 32b.
Onchocerca embryos, location 718.
Onchocerca in Guatemala, life-history 5a.
— *cebei* n. sp. in buffalo 167f.
— *cervicalis* in horse in India 604c.
— *gutturosa* in cattle in Britain 125a.
—, life-history 125a.
— *volvulus* (?) in Belgian Congo 19c.
— — in West Africa 79a.
Onchocerciasis 330a.
— in man 61b, 421a, 555b, 555c, 555d.
—, ocular 561a.
— reviewed 35a.
Anchorhynchus, nematodes in 459b.
— *gorbuscha*, helminths in 732ch.
Ondatra zibethica, *Capillaria hepatica* in 106a.
Oochoristica ratti n. sp. in rat 312b.
Opecoelinae, key to genera 603d.
Opegaster, key to spp. 603d.
— *beliyai* n. sp. in *Gobius giuris* 606a.
— *mastacembalii* n. sp. in *Mastacembalus armatus* 603d.
— *mehrii* n. sp. in *Mastacembalus armatus* 603d.
Ophicephalus gachua, *Camallanus* n. sp. in 114p.
— *punctatus*, *Allocreadium* n. sp. in 261a.
— *striatus*, 2nd intermediary for *Gnathostoma spinigerum* 32q.
Ophidascaris amucronata n. sp. in snakes 249.
— *labiatopapillosa*, life-history 114o.
Ophiodiplostomum spectabile n. g., n. sp. 479a.
Ophiorchis n. g. 244a.
Ophioxenos to *Chiorchis* 170a.
Ophisaurus ventralis, *Brachycoelium hospitale* in 217s.
Opisthgonoporidae n. fam. 157.
Opisthgonoporus amadai n. g., n. sp. 157.
Opistholebetidae reviewed 534a.
Opisthorchiasis in carnivores in Russia 119e.
— — man 677c.
— —, pathology 290c.
— — Russia 119c, 119d.
Opisthorchis felineus in East Prussia, life-history 70a.
— — — man in Poland 257d.
Orchepedum described 732bj.
— *formosum* redescribed 732bj.
Oriolus oriolus, *Cardiofilaria* n. g., n. sp. in 666a.
Ornithobilharzia lari n. sp. in *Larus argentatus* 322b.
Ornithofilaria n. g. for *Filaria mavis* 703.
Ornithogalum saundersiae, *Heterodera marioni* in 47o.
Ornithostrongylinae n. subf. 482a.
Ornithostrongylus almeidai n. sp. in *Tinamus major* 482a.
— *quadriradiatus* in pigeon 233a.

INDEX OF SUBJECTS.

- Oshimaia taiwana* in duck 285f.
Ostertagia bakuriani n. sp. 732dt.
 — *butschewi* n. sp. in sheep 732do.
 — *circumcincta* in sheep, immunity 522a.
 — (*Grosspiculagia*) *petrowi* n. sp. 732dk.
 — *kolchida* n. sp. 732dd.
 — *okapiae* n. sp. 644c.
 — (*Ostertagia*) *tatiani* n. sp. 732dk.
 — *polarica* n. sp. 732dk.
Oswaldocruzia skrjabini n. sp. in *Lacerta vivipara* 732ej.
Oswaldoneminae n. subf. 568a.
Otopterus waterhousei, *Capillaria* n. sp. in 417b.
Ovis canadensis, *Protostrongylus* n. sp. in 732t.
Oxyspirura, key to spp. 732p.
 — (*Oxyspirura*) *toroi* n. sp. in *Colinus graysoni* 256b.
 — *petrowi* redescribed 732p.
 — *wittei* n. sp. in *Dioptrornis tornensis* 249.
 Oxyurid in *Chaetophractus villosus* 224b.
Oxyuris magnavulvaris n. sp. 32b.
 Oxyuroidea, phylogeny 563b.
- Pacific, Monogenea 322j.
 —, South, human helminths 549a.
 Paeony, *Aphelenchoides fragariae* in 217d.
Pagellus centrodontus, *Diclidophora* n. sp. in 3c.
Palaemon spp., 2nd intermediaries for *Coitocaecium* sp. & *Microphallus* sp. 213a.
 Palestine, helminths 518a, 560a.
Pallisentis nagpurensis, emended description 246b.
Panagrolaiminae n. subf. 47a.
 Panama, equine helminths 199b.
 —, — strongylosis 2a.
 —, *Trichostrongylus axei* 322j.
Parabronema congolense n. sp. 644b.
Paracotylinea n. subf. 170a.
Paradoxurus philippinensis, *Molineus* n. sp. in 594d.
 —, *Rictularia* n. sp. in 594d.
Parafasciolopsis fasciolaemorpha in Germany, redescribed 21c.
 —, life-history 489b, 559a.
Parafilaria in horse in Russia 732cd.
Parafossarulus striatulus, 1st intermediary for *Clonorchis sinensis* 187a.
 Paragonimiasis in man 2b, 307a.
 —, X-ray examination 290e.
Paragonimus in China, life-history 3d.
 —, incidence 199d.
 — *kellicotti*, cytology 143c.
 — *westermanni* in cat in India 604c.
 —, life-history 651a.
 — in mink 105c.
- Paragordionus rautheri* n. sp. 150a.
 Paramphistomidae revised 690a.
Paramphistomum cervi in sheep in Britain 240c.
 — *cuomum* n. sp. 111e.
 — *maplestoni* n. sp. 111e.
Paranisakis parva n. sp. in *Salmo fario* 396b.
Parascaris equorum, cytology 213c, 448a, 591a, 611b.
 —, embryology 691.
 —, local race in China 91b.
 —, pre-natal infection 656b.
 Parasites & cancer 696.
 Parasitic enteritis in horse 672a.
 Parasitology 455a.
 —, discussion 286a.
 —, historical 335b.
 —, medical 693.
 —, recent developments 213d.
 —, veterinary, text-book 724.
Parhamatospiculum nodulosum to *Hamatospiculum* 256c.
Paronatrema vaginicola n. g., n. sp. in *Squalus* 74d.
Parorchis acanthus in *Larus argentatus*, immunity 322j.
 Parsnip, *Anguillulina dipsaci* disease in 107b.
Paruterina bovienii n. sp. in *Macropteryx longipennis* 642a.
 — *javanica* n. sp. in *Macropteryx longipennis* 642a.
Paryseria adeliae n. g., n. sp. in *Pygoscelis adeliae* 650d.
Passalurus abditus n. sp. in rodent 257c.
Passer domesticus, cestodes in 687a.
 Pathology, *Anguillulina dipsaci* 88b.
 —, *Ascaris lumbricoides* 732bh.
 —, *Brachylaemus suis* 466b.
 —, *Clonorchis sinensis* 9a.
 —, *Dictyocaulus* 732h.
 —, *Didymocystis wedli* 257f.
 —, *Diphyllbothrium erinacei* 98a.
 —, *Elaphostrongylus odocoilei* 732bm.
 —, *Eurytrema pancreaticum* 732eq.
 —, Haemostrongylosis vasorum 636b.
 —, human helminths 662a.
 —, nematodes 476a.
 —, opisthorchiasis 290c.
 —, paragonimiasis 290e.
 —, Schistosomiasis mansoni 614a.
 —, trematodes 710, 732bs.
Pedioceetes phasianellus, *Athesmia* n. sp. in 47f.
Pedunculacetabulum pedicellata n. sp. in *Chiloscyllium indicum* 604b.
 Perch, Tetraphyllid larva in 148a.
Perdix perdix, *Syngamus trachea* in 199h.
Peromyscus gossypinus, 2nd intermediary for *Diphyllbothrium mansonoides* 114t.
Petalocotyle to *Gyliauchenidae* 534a.

INDEX OF SUBJECTS.

Petalodiplostomum ancyloides n. g., n. sp. 479a.
Pfenderius to *Pseudodiscus* 170a.
Phacochoerostongylus pricei redescribed 76a.
Phalacrocorax sp., *Contracaecum* n. sp. in 70c.
— *africanus*, *Corynosoma tunitae* in 516a.
— *neglectus*, *Corynosoma* n. sp. in 516a.
Pharyngosetaria n. g. for *Filaria marcinowskyi* 732cf.
Pheniscus humboldti, *Cyathostoma* n. sp. in 74a.
Philippine Islands, avian cestodes 343a.
—, human helminths 569a.
—, *Monorchotrema* 324a.
—, *Plagiorchis* sp. 732c.
Philometra congolense n. sp. in *Clarias* sp. 249.
Philophthalmus, key to spp. 732x.
— *skrjabini* n. sp. in *Larus ridibundus* 732x.
Phrynobatrachus graneri, *Aplectana* n. sp. in 249.
Phyllobothrium magnum to *Monorygma* 650c.
Phyllodistomum, key to spp. 111e.
— *almorii* n. sp. in frog 169b.
— *folium* in stickleback 564a.
— *shandrai* n. sp. 111e.
— *sinense* n. sp. in *Odontobutis obscura* 203c.
— *solidum* n. sp. 32b.
Physa gyrina, 1st intermediary for *Glypthelmins quiza* 368a.
— *halei*, 1st intermediary for *Dasymetra villicaeca* 351a.
—, —, — *Renifer aniorum* 351a.
Physaloptera, key to spp. 585a.
— *felidis* in *Caris latrans* 295b.
— *immerpani* n. sp. in *Atelerix frontalis* 585a.
— *losseni* n. sp. in *Spizaetus bellicosus* 585a.
— *mexicana* n. sp. in *Buteo* sp. 133c.
— *mirandai* n. sp. in *Metachirus nudicaudatus* 207g.
— *tasmani* n. sp. in *Chamaeleon macrolepis* 585a.
— *turgida*, life-history 732d.
— (*Turgida*) *turgida* redescribed 165a.
Physella utahensis, 1st intermediary for *Haplometrana* n. sp. 32a.
Physiology, *Ancylostoma caninum* 198e.
—, *Anguillulina dipsaci* 217b.
—, *Ascaridia lineata* 732b.
—, ascarids 684c.
—, *Ascaris* 493a, 684b.
—, — *lumbricoides* 32e.
—, cestodes 729.
—, *Cryptocotyle lingua cercariae* 322j.
—, *Echinostoma revolutum* 199g.
—, *Eustrongylides* sp. larvae 322j.

Physiology, helminths 684a.
—, *Heterodera marioni* 214a.
—, *Moniezia expansa* 89e.
—, nematodes 337a.
—, plant nematodes 217a.
—, trichinella larvae 318a.
Pig, ascariasis in 1f, 676a, 732ei.
—, *Brachylaemus suis* in 18a, 80a, 466b.
—, cysticerciasis in 570a.
—, *Cysticercus cellulosae* in 519a.
—, helminthiasis in 174b.
—, helminths in 217k, 250a, 355a, 387a, 502c.
—, hyostongylosis in 375a.
—, metastrongyles in 369a, 732dv, 732dy.
—, strongyloidiasis in 122a.
—, *Suifilaria* n. g., n. sp. in 585b.
—, *Trichinella* in 368c.
—, — *spiralis* in 519a.
—, trichinelliasis in 222a, 630a.
Pigeon, *Ascaridia* in 732g.
—, — *columbae* in 59a.
—, *Bertiella* spp. in 604c.
—, *Clinostomum attentuatum* in 32k.
—, helminths in 89b.
—, nematode disease in 147a.
—, *Orrnithostongylus quadriradiatus* in 233a.
Pineapple, *Heterodera marioni* disease in 126a.
Pirenella comica, 1st intermediary for *Heterophyes heterophyes* 711.
Plagioporus branchiostegi n. sp. 157.
Plagiorchiinae reviewed 237a.
Plagiorchioidea reclassified 114i.
Plagiorchis sp. in man in Philippine Islands 732c.
— *laricola* disease in turkey 29d.
— *micracanthos*, life-history 114h.
— *muris*, life-history 114h.
— in man, experimental 32p.
— *noblei* to *Plagiorchioidea* n. g. 237a.
— *proximus*, life-history 114h.
Plagiorchioidea n. g. for *Plagiorchis noblei* 237a.
Planorbis boissyi, intermediary for *Schistosoma mansoni* 227a.
Plants, aquatic, *Anguillulina dipsaci* n. var. in 7a.
—, —, nematodes in 430a.
—, nematodes in 234a.
—, *Rhabditis lamdiensis* & bacteria in 394a.
Platybothrium hypopryoni in *Hypopryon brevisrostris* 217p.
Platyhelminia in domestic animals in Burma, check-list 192a.
—, phylogeny 414a.
—, taxonomy 465a.
Platynosomum philippinorum congolensis n. subsp. 732dq.

INDEX OF SUBJECTS.

- Pleurogenes pabda* n. sp. in *Callichrous pabda* 606a.
- Pleuronectes flesus*, *Contracaecum aduncum* in 471a, 489a.
- Plotus levaillandi*, *Contracaecum* n. sp. in 70c.
- Pneumatophilus leidy* n. sp. in water snake 217t.
- Pneumonoeces almorai* n. sp. 603g.
- Pneumotrema travassosi* n. g., n. sp. in *Amphisbaena alba* 352c.
- Podiceps ruficollis*, *Acuaria* (*Echinuria*) *decorata* in 261b.
- Podocnemis expansa*, *Telorchis* n. sp. in 334e.
- Podocotyle* reviewed 199f.
- spp. in fishes 199f.
- *apodichthysi* n. sp. 199f.
- *blennicottusi* n. sp. 199f.
- *californica* n. sp. 199f.
- *elongata* n. sp. 199f.
- *endophrysi* n. sp. 199f.
- *kofoidi* n. sp. 199f.
- *pacifica* n. sp. 199f.
- *pedunculata* n. sp. 199f.
- Poland, cat helminths 507a, 678b.
- , dog helminths 678c.
- , domestic animal helminths 148c.
- , *Opisthorchis felineus* 257d.
- Polylekithum* to *Allocreadium* 261a.
- Polymorphus minutus*, life-history 463a.
- Polynemus heptadactylus*, *Neoechinorhynchus* n. sp. in 212b.
- Polyonchobothrium gordoni* n. sp. in *Heterobranchius bidorsalis* 352a.
- Polyorchitreminae* n. subf. 604c.
- Polystoma ocellatum*, anatomy 688a.
- Pomatiopsis*, 1st intermediary for *Paragonimus* 199d.
- Porocephalus clavatus* in *Boa constrictor* 69a.
- Postharmostomum noveboracensis* n. sp. in *Tamias striatus* 47g.
- Posthodiplostomum australe* redescribed 167b.
- Potato, *Heterodera schachtii* in 107c, 111a, 111d, 230a.
- , — disease in 29c, 160a.
- Poultry, "Blackhead" in 240a.
- , *Chelospirura hamulosa* disease in 182a.
- , helminthiasis in 22a, 240b.
- , helminths in 183a, 302a, 389e, 732ba.
- Primulas, *Anguillulina dipsaci* in 318e.
- Pristiurus melanostomum*, *Pseudobothrium* n. g., n. sp. in 3c.
- Proalarioides tropidonotis* n. sp. in *Tropidonotus piscator* 261d.
- Procamallanus slomei* n. sp. in *Xenopus laevis* 170b.
- Profilicollis* discussed 322j.
- Prolecidhodiplostomum cavum* n. sp. 479a.
- *constrictum* n. g., n. sp. 479a.
- Prosorhynchus freitasi* n. sp. 354a.
- Prosotocus himalayai* n. sp. in *Rana cyanophlyctis* 606c.
- Prosthodendrium* (*Paralecidhodendrium*), key to spp. 732ci.
- *lucifugi* n. sp. in bats 732ci.
- *nocomys* n. sp. in bats 732ci.
- Prosthogonimiasis* 322j.
- Prothogonimus* sp., life-history 432a.
- Proteocephalidae* discussed 485a.
- Proteocephalus bivittellatus* n. sp. 220a.
- (*Ophiotaenia*) *phillipsi* n. sp. in *Trimeresurus trigonocephalus* 485a.
- *rhabdophidis* n. sp. in *Rhabdophis stolarus* 485a.
- Proterodiplostomidae* n. fam. 479a.
- Proterodiplostomum longum* n. comb. 479a.
- *tumidulum* n. g., n. sp., 479a.
- Protospirura oligodonta* n. sp. in *Mus* sp. 70c.
- Protostrongylus rushi* n. sp. in *Ovis canadensis* 732t.
- Protozoophaga obesa* redescribed 563b.
- Pseudamphistomum truncatum* in silver fox 69a.
- Pseudaxius hortulorum*, *Schulzinema* n. g., n. sp. in 732by.
- Pseudobilharziella querquedulae* n. sp. in *Querquedula discors* 322b.
- Pseudobothrium Gallieni* to *Leptobothrium* nom. nov. 167e.
- *pristiuri* n. g., n. sp. in *Pristiurus melanostomum* 3c.
- Pseudocladorchis* to *Pseudodiscus* 170a.
- Pseudomermis vanderlinde* n. sp., intersexual 732ed.
- Pseudoneodiplostomum siamense* n. comb. 479a.
- *thomasi* n. g., t. sp. 479a.
- Pseudorasbora parva*, 2nd intermediary for *Clonorchis sinensis* 187a.
- Pseudorenifer*, key to spp. 143a.
- *brachyoesophagidius* n. sp. in *Thamnophis sirtalis* 143a.
- Pseudorhabdolaimus limnophilus* n. g., n. sp. 152b.
- Pseudotrigea sarcogypomys* n. sp. 603f.
- Psilostomum cygne* n. sp. in swan 263b.
- Psophia viridis*, *Athesmia* n. sp. in 47f.
- Psychodidae*, *Rhabditis* n. sp. in 66a.
- Ptyasiorchis* n. g. 244a.
- Puerto Rico, human helminthiasis 223a
- , *Necator americanus* 120a.
- , *Schistosomiasis mansoni* 614b.
- Pulchrosomoides elegans* n. g., n. sp. in *Iguana tuberculata* 207b.
- Pygidioopsis marivillai* n. sp. in *Haliaeetus leucogaster* 594e.
- Pygocelis adeliae*, *Contracaecum* n. sp. in 650d.
- , *Paryseria* n. g., n. sp. in 650d.

INDEX OF SUBJECTS.

Querquedula discors, *Pseudobilharziella*
n. sp. in 322b.

Rabbit, *Cysticercus pisiformis* in 408a.

—, helminths in 58a, 406.

—, hydatidosis in 19a, 19b.

—, *Nematodirus* n. spp. in 217n.

—, *Trichinella* in 612b.

—, *Trichinella* & haematology of 319a.

—, *Trichostrongylus* n. sp. in 116b.

Railletina cesticius in fowl, age
immunity 322j.

—, life-history 293b.

—, *daetensis* n. sp. 343a.

—, *echinobothrida*, life-history 293b.

—, (*Paroniella*) *bulbularum* n. sp. 343a.

—, *cirroflexa* n. sp. 343a.

—, *coronea* n. sp. 343a.

—, *culiaana* n. sp. 343a.

—, *ngoci* in *Ducula badia* 480c.

—, *tinguiana* n. sp. 343a.

—, *sequens* n. sp. 343a.

—, (*Skrjabinia*), key to spp. 237b.

—, *centrocerci* n. sp. in *Centrocerus*
urophasianus 237b.

—, *torquata* var. *rajae* n. var. 343a.

Rana spp., *Glysthelmins* *quieta* in 368a.

—, 2nd intermediaries for *Exorchis*
oviformis 508a.

—, —, — *Glysthelmins* *quieta*
368a.

—, *cyanophlyctis*, *Prosotocus* n. sp. in
606c.

—, *pretiosa*, *Haplometrana* n. sp. in 32a.

—, 2nd intermediary for *Haplo-*
metrana n. sp. 32a.

Raphidascaris canadensis in *Esox lucius*,
life-history 322j.

—, *laurentianus* n. sp. in *Salvelinus*
fontinalis 89d.

Rat, *Capillaria hepatica* in 322j.

—, *Cysticercus longicollis* & cancer in
151a.

—, *Haemostromylus* n. sp. in 379a.

—, helminths in 162e, 259a.

—, *Nippostrongylus* in 162d.

—, — *muris* in 54a, 322j.

—, *Oochoristica* n. sp. in 312b.

—, *Strongyloides ratti* in 1b, 203e.

—, *Trichinella* in 219b, 322j.

—, trichinelliasis in 412a.

Red Sea, *Bucephalidae* 354a.

Refuse transmitting helminths 732en.

Reindeer, *Dictyocaulus hadwemi* in
732eg.

—, trichostrongylids in 732dk.

Renicola paraquanta n. sp. in *Larus ridi-*
bundus 732dm.

—, *quinta* n. sp. 732eb.

Renifer aniarum, life-history 351a.

Reniferinae, bionomics 322j.

Reptiles, trematodes in 479a.

Rhabdias fülleborni, reproductive organs
562a, 622a, 622b.

Rhabditis spp., cytology 217i.

—, *coarctata*, bionomics 732cs.

—, *debilicauda* n. sp. 398a.

—, *dubia* n. sp. in *Psychodidae* 66a.

—, *hambletoni* n. sp. in *Gasterocercodes*
brasiliensis 442a.

—, *juglandicola* n. sp. 398a.

—, *lamdiensis* transmitting pathogenic
bacteria to plants 394a.

—, (*Parasitorhabditis*) n. subg. 398a.

—, *pellio* in man in Mexico 256a.

Rhabdophis stolarus, *Proteocephalus*
(*Ophotaenia*) n. sp. in 485a.

Rhinolophus ferrum-equinum, *Strongyl-*
acantha glycyrrhiza n. var. in 364b.

Rhipidocotyle eckmanni n. sp. 354a.

—, *khalili* n. sp. 354a.

Rictularia cahirensis in cat in India 604c.

—, *magna* n. sp. in *Mus* sp. 70c.

—, *paradoxuri* n. sp. in *Paradoxurus*
philippinensis 594d.

Ridgeworthia to *Apharyngostrigea* 606b.

Rodent, *Passalurus* n. sp. in 257c.

Roe-deer, *Dictyocaulus filaria* in 371c.

—, helminthiasis in 150c.

—, helminths in 20a.

Romania, *Thelazia rhodesi* 167a.

Rotylenchus blaberus n. sp. in yam 47o.

Ruminants, "husk" in 672c.

—, nematodes in 732ct.

—, stomach worms in 21b.

—, *Thelazia rhodesi* in 167a.

—, trichostrongylosis in 367b.

—, *Trichuris* in 585c.

Russia, ancylostomiasis 732df.

—, cat helminths 732di.

—, dog helminths 732s.

—, domestic animal helminths 732cw.

—, *Fasciola gigantica* 732bt.

—, fish helminths 732bp.

—, goose helminths 732bf.

—, hookworm 732cg.

—, horse helminths 732bb, 732cp.

—, human ancylostomiasis 205a.

—, — filariasis 669b.

—, — helminths 552a, 552c, 552d,
552e.

—, medical helminthology 552j.

—, metastrongyles 732dv.

—, *Moniezia* 732cx.

—, — *expansa* 732eu.

—, opisthorchiasis 119c, 119d, 119e.

—, *Parafilaria* 732cd.

—, poultry helminths 732ba.

—, sheep & goat helminths 732bw.

—, sheep helminths 732dt.

—, *Synthetocaulus* 732k.

—, tomato nematodes 152a.

Ruzguniella kofoidi n. sp. in *Nyroca*
affinis in North America 114q.

Saccharum spontaneum, *Anguina* n. sp.
in 47o.

Salamanders, helminths in 32b, 299a.

INDEX OF SUBJECTS.

- Salmo fario*, *Neogoezia* n. g., n. sp. in 396b.
 —, *Paranisakis* n. sp. in 396b.
Salvelinus fontinalis, helminths in 89d.
Salvinia natans, 2nd intermediary for *Fasciolopsis buski* 257a.
Sarkidornis melanotus, *Echinuria* n. sp. in 644a.
Scardinius erythrophthalmus, *Asymphy-lodera tincae* in 92d.
Schistosoma in appendix 13b.
 — spp. in Belgian Congo 111f.
 —, bionomics 167c.
 — *bovis* in *Limnotragus spekei* 257e.
 — var. *matthei* n. comb. 111f.
 — *haematobium* 15b.
 — var. *intercalatum* n. comb. 111f.
 — *mansoni*, technique for concentrating ova 12a.
 Schistosome intermediaries in Africa, control 23c.
 — — Belgian Congo 19d, 423b.
 — —, control 36f.
 — — in Egypt 28b.
 — — — India 700.
 —, life-history 36c.
 — in *Limosa fedoa* 114m.
Schistosomiasis 308a, 326c.
 —, antimony compounds 45a.
 —, control with ducks 13a.
 — in dog in India 190b, 604c.
 — — Egypt, control 11.
 — — India 732j.
 — — man 36b, 48b, 117d, 136a, 144a, 266d, 285e, 316b, 316c, 385a, 509a, 548d, 553a.
 — —, "Anthiomaline" 36d, 166a, 654a.
 — —, control 201a.
 — —, copper compounds 4c.
 — — in Egypt, incidence 71b, 115c.
 — — — Libya 269e.
 — —, "Paludex" 81c.
 — — in Sudan 318b.
 — —, various anthelmintics 4b.
 — —, X-ray diagnosis 531b.
 — — South Africa 56a, 672b.
 — & splenomegaly 440b.
 — — in Egypt 238a.
 — tuberculosis in man 266c.
 — *haematobia* 81b, 305b, 316a, 372a, 539a, 615a.
 — —, "Anthiomaline" 87a, 166b.
 — — in Libya 306a.
 — — — Madagascar 87c, 285d.
 — — — man 145a.
 — — — Morocco 285a.
 — *japonica*, cerebral 460a.
 — — in China 290d.
 — — Dutch East Indies 304c, 304e.
 — — — man 9b.
 — *mansoni* 49b, 623a.
 — — in Abyssinia 227a.
 — —, anaemia 224d.
Schistosomiasis mansoni, diagnosis 71a.
 — —, pathology 614a.
 — — in Puerto Rico 614b.
Schizamphistomoides to *Chiorchis* 170a.
Schizamphistomum to *Chiorchis* 170a.
Schulzia subventricosa n. comb. 732ej.
Schulzinema miroljubovi n. g., n. sp. in *Pseudaxis hortulorum* 732by.
Schizothorax zarudnyi, *Eosentis rigidus* in 618a.
Scorzonera tau-saghyz, *Anguillulina multicincta* in 732ef.
Scyllina cyanipes, intermediary for *Tetrameres americana* 47h.
Sea-gull, trematode disease in 494b.
Seals, ascarids in 45b.
Sebastes marinus, *Tetrarhynchus erinaceus* (?) larva in 150b.
Sebastodes spp., *Microcotyle sebastis* in 114k.
Sesarma spp., 2nd intermediaries for *Paragonimus* 3d.
Setaria equina in mule 636a.
 — *leichungwingi* n. sp. in buffalo 203b.
Seuratum congolense n. sp. in bats 644a.
Sheep, carbon tetrachloride poisoning 322g.
 —, cestodes in 604b.
 —, coenuriasis in 732dr.
 —, *Cooperia curticei* in 217m, 322j.
 —, *Cysticercus tenuicollis* in 480a.
 — — disease in 173b.
 —, *Dicrocoelium dendriticum* in 273a.
 —, *Dictyocaulus* in 175a, 732cz.
 —, *Eurytrema pancreaticum* in 732eq.
 —, *Fasciola hepatica* in 578a.
 —, haemonchiasis in 140c.
 —, *Haemonchus contortus* in 235b.
 —, helminthiasis in 95a, 103a, 107a, 133a, 588a.
 —, helminths in 27a, 176a, 180b, 195b, 196f, 491c, 492a, 717, 732dt, 732bw.
 —, hydatid in 32c.
 —, liver-fluke disease in 524a.
 —, lungworm disease in 542b, 581a.
 —, Merino, hookworm in 23a.
 —, metastrongylosis in 161a.
 —, *Moniezia* in 732cz.
 —, — *expansa* in 162c, 322j, 732eu.
 —, nematodes in 62a, 208a.
 —, Nematodirus disease in 173a.
 —, *Oesophagostomum columbianum* in 195a, 451a.
 —, *Ostertagia* n. sp. in 732do.
 —, — *circumcincta* in 522a.
 —, *Paramphistomum cervi* in 240c.
 —, stomach worms in 29h.
 —, *Synhetocaulus* in 732k.
 —, *Taenia multiceps* in 301a.
 —, trichostrongylosis in 322j, 525a, 732dw.
Sihndia gangetica, trematodes in 604c.

INDEX OF SUBJECTS.

- Simulium ornatum*, intermediary for *Onchocerca gutturosa* 125a.
Siren lacertina, *Cercorchis* n. sp. in 130b.
Skrjabinogylus nasicola, new hosts 371d.
Skrjabinoptera (*Didelphysoma*) *phrynosoma* redescribed 165a.
 Snail, *Leucochloridium* sp. in 573a.
 Snails, cercariae in 322j.
 —, intermediaries for *Dicrocoelium dendriticum* 652a.
 —, — *Nemathelminia* 575a.
 Snake, water, *Pneumatophilus* n. sp. in 217t.
 Snakes, *Ophidascaris* n. sp. in 249.
 Somaliland, helminths 87b.
 South Africa, *Hatertia gallinarum* 536a.
 — —, schistosomiasis 56a, 672b.
 Spain, human helminths 224c.
 Sparganosis in man 723.
 —, ocular, novarsenobenzol 284a.
 —, —, treatment 420b, 437a.
 — in U.S.A. 322g.
 Sparganum in man, infection route 97c.
 — spp. in *Natrix* 137a.
 — *browni* n. sp. in *Natrix sipedon* 54b.
 — *mansonoides*, immunity 322j.
 — —, oral transmission 322j.
 — *proliferum*, morphology 322j.
 Sparrows transmitting helminth ova 732cn.
Sphaeridiotrema globulus in duck, life-history 244c.
Sphaerium sp., 1st intermediary for *Crepidostomum cornutum* 114e.
Sphaerostoma bramae in *Hyla arborea* 92d.
Sphincterostoma branchiostegi n. g., n. sp. 157.
Sphincterostomatidae n. fam. 157.
Spinometra gangeticus n. sp. 244a.
Spirocerca lupi, infection route 90b.
 — — redescribed 3a, 482b.
Spirodela polyrhiza, 2nd intermediary for *Fasciolopsis buski* 257a.
Spirometra n. g. for *Diphyllbothrium erinacei* 114r.
Spiroxyx gedoelsti n. sp. in *Bitis arietans* 249.
 Spirurids in fowl 604c.
Spizaetus bellicosus, *Physaloptera* n. sp. in 585a.
 Splenomegaly & schistosomiasis 440b.
 — — — in Egypt 238a.
Squalus, *Paronatrema* n. g., n. sp. in 74d.
Squamostrongylus n. g. 568a.
Stagnicola emarginata, *Cercaria* n. spp. in 114j.
 — —, cercariae in 322f.
 — —, *Diplostomum flexicaudum* larvae in 322i.
 — —, 1st intermediary for *Plagiorchis* spp. 114h.
Stellobronema acuariana n. g., n. sp. 732bi.
Stephanofilaria kaeli n. sp. in cattle 318f.
 Stephanofilariasis in cattle in Malay 318f.
 —, treatment 576a.
Sterrhurus n. spp. 604b.
Stichorchis to *Cladorchis* 170a.
 — *waltheri* n. sp. 648b.
 Stickleback, *Phyllodistomum folium* in 564a.
Stilestrongylus stilesi n. g., n. sp. 207e.
Stocksia puehuni n. g., n. sp. in *Clarias lazera* 352a.
 Stomach worms in ruminants, diagnosis 21b.
 — — — sheep, epidemiology 29h.
Stomachicola secundus n. sp. 604b.
Stomatrema guberleti n. sp. in *Farancia abacura* 212a.
Strigea spp. redescribed 167b.
 — *baylisi* n. sp. 167b.
 — *glandulosa* n. sp. 167b.
 — *nephronis* n. sp. 606b.
 — *micolli* n. sp. 167b.
 — *orientalis* n. sp. 606b.
 — *suttoni* n. sp. 167b.
 Strigeid cercaria disease in tadpole 322j.
 Strigeids in birds in India 606b.
 — listed 361a.
Strix flammariae, *Eurytrema* n. sp. in 563a.
Strongylacantha glycirrhiza var. *romana* n. var. in *Rhinolophus ferrumequinum* 364b.
 Strongyle larvae, migration route 297a.
 — — in soil, bionomics 403.
 — ova & larvae, chemical control 673c.
 Strongyles in domestic animals, control 180a.
 — — equines, age immunity 1c.
 — — horse, differentiation 732dg.
 Strongyloides in domestic animals 732cl.
 —, various anthelmintics 3b.
 — *ratti*, age immunity 162g.
 — —, bionomics 162f, 322j.
 — — in guinea-pig, experimental infection 322j.
 — —, infection by injection 1a.
 — —, — route 162h.
 — — larvae, bionomics 1a.
 — — in mouse 32i.
 — — — rat in China 203e.
 — — —, immunity 1b.
 — —, single larva infections 47k.
 — *stercoralis* 645a.
 — —, life-history 732z.
 — — in man, Fouadin 304f.
 — *westeri* in horse 235a.
 Strongyloidiasis 374b.
 — in domestic animals, control 732y.
 — — man 61c, 544a, 677b.
 — — — in Germany 68a.

INDEX OF SUBJECTS.

- Strongyloidiasis papillosa* in nutria 648a.
 ——— pig 122a.
 — *stercoralis* in man 638a.
Strongylosis in equines, diagnosis 295a.
 ——— in East Africa 291b.
 ——— Panama 2a.
 ——— horse 673b.
 ———, "Allegan" 174c.
 ———, control 21a.
Strongylus in horse, chemical control 146a.
 — *equinus* larvae, migration 708.
Struthio camelus, *Libyostrongylus* n. sp. in 732bc.
Stunkardia to *Zygocotyle* 170a.
Subulura dentigera n. sp. in *Numida mitrata* 585d.
 — *kabulanus* n. sp. in *Tetraogallus* sp. 603i.
 Sudan, schistosomiasis 318b.
 Sugar-beet, *Anguillulina dipsaci* disease in 318g.
Suifilaria suis n. g., n. sp. in pig 585b.
Suncus coeruleus, *Capillaria* n. spp. in 203a.
 Swan, *Filicollis anatis* in 263b.
 —, helminths in 263b.
 —, *Hymenolepis gracilis* in 263b.
 —, *Psilostomum* n. sp. in 263b.
 Sweden, human trichinelliasis 659a, 659b.
Syngamus okapiae n. sp. in okapi 52a.
 — trachea, life-history 60d.
 —, sex incidence in *Perdix perdix* 199h.
 — in turkey in U.S.A. 346a.
Synthetocaulus in sheep in Russia 732k.
 — *capillaris*, life-history 257b.
 — *kochi*, life-history 732r.
 — *skerjabini* n. sp. 732k.
Syphacia venteli n. sp. in *Nectomys squamipes* 563b.
 Syria, hydatid 609f.
Tachygonetria inflatocervix n. sp. in *Testudo ibera* 603i.
 Tadpole, strigeid cercaria disease in 322j.
Taenia in man 267a, 359a.
 ———, tetrachlorethylene 320a.
 — *cervi*, experimental infections 297b.
 — redescrbed 297b.
 — *hyperborea* redescrbed 732bv.
 — *multiceps* & sturdy in sheep 301a.
 — *pisiformis* in dog, arecoline hydrobromide 388a.
 — *saginata*, life-history 118d.
 — in man, bionomics 29f.
 ———, treatment 390a.
 —, multiple infections 87e, 114s.
 — ova, numbers per segment 32 l.
 ———, technique for artificial hatching 551a.
 ———, viability 204a.
Taenia saginata & *T. solium* ova identical 25b.
 — *solium* in man in India 189a.
 — *taeniaeformis*, bionomics 294b.
 — in cat 678a.
Taeniasis saginata 118b.
 — in man 685a.
 Taeniid larvae, differentiation 732bq.
Tamias striatus, *Postharmostomum* n. sp. in 47g.
Tapirus americanus, *Monodontus* n. sp. in 207h.
Tatus novemcinctus, *Aspidodera* n. sp. in 334b.
Taxidea taxus, *Fossor* n. g., n. sp. in 167d.
Taxorchis to *Cladorchis* 170a.
Tayassus tajacu, *Gongylonema* n. sp. in 207i.
 Technique for artificial hatching of *Taenia saginata* ova 551a.
 — concentrating hookworm ova 629a.
 ——— ova 8a.
 ——— *Schistosoma mansoni* ova 12a.
 — counting ova in helminths 732cm.
 — culturing helminths 154.
 — diagnosing enterobiasis 73a, 353a.
 ——— metastrongyles 732bg.
 — stomach worms 21b.
 ——— *Trichinella* 43b.
 — estimating hookworm ova 188c.
 — examining faeces 133h.
 — water for helminth ova 552f.
 — excysting metacercariae 368b.
 — flotation of *Ascaris* ova 545a.
 ——— liver-fluke ova 402.
 — infecting plants with *Anguillulina dipsaci* 88a.
 — isolating helminth ova & larvae from grass 732bd.
 ——— *Trichinella* larvae 368d.
 — making antiformin substitute 32n.
 — mounting trematodes 657a.
 — preparing hydatid antigen 32d.
 — preserving helminth ova in faeces 206a.
 — staining cestodes 319b.
 ——— *Dracunculus* larvae 32j.
 ——— plant nematodes 196b.
 — timing defaecation in fowl 47p.
Telorchis hagmanni n. sp. in *Podocnemis expansa* 334e.
Testudo ibera, *Tachygonetria* n. sp. in 603i.
Tetanonema strongylurus n. g., n. sp. in *Bdellostoma heptatrema*, intersexuality 732ed.
Tetrabothrius mawsoni n. sp. 650c.
Tetrameres americana, life-history 47h.
Tetraogallus sp., *Subulura* n. sp. in 603i.
Tetraonchus alaskensis n. sp. in salmonoid fishes 47j.

INDEX OF SUBJECTS.

- Tetraphyllid larva in perch 148a.
Tetrarhynchus erinaceus (?) larva in *Sebastes marinus* 150b.
Thamnophis sirtalis, *Pseudorenifer* n. sp. in 143a.
Theba spp., intermediaries for *Dicrocoelium dendriticum* 732dj.
Thelandros scleratus redescribed 732cy.
Thelazia spp. in man & animals 384a.
— *digiticaudata* n. sp. in *Halcyon chelicuti* 249.
— *lachrymalis* in horse 240d.
— *rhodesi* disease in ruminants in Romania 167a.
Thelazo to *Procammallanus* 170b.
Thynnus thynnus, *Didymocystis wedli* in 257f.
Tinamus major, *Ornithostrongylus* n. sp. in 482a.
Tinca tinca, *Dactylogyrus macracanthus* in 69b.
Tobacco, *Aphelenchoides ritzeana-bosi* in 683a.
—, *Heterodera marioni* in 46a, 46c.
—, — disease in 646b.
—, *Tylenchorhynchus* n. sp. in 47o.
Tolypeutes mataco, *Longistriata* n. sp. in 224f.
Tomato, nematodes in 152a.
Tomicus bidens, *Aphelenchulus* n. sp. in 66a.
Toxascaris leonina redescribed 165a.
Toxicity, anthelmintics 501a.
—, carbon tetrachloride 129a, 322g.
—, chenopodium oil 331c.
—, helminths 468a, 468b.
—, hydrogen peroxide 133b.
—, "Timbó" 461a.
Toxins, helminth 732co.
Toxocara cati, cuticle 671a.
Trachinotus spp., *Epibdella mellei* in 687b.
Travassosinia to *Chiorchis* 170a.
Travassostongylus quatuor n. sp. in *Metachirus nudicaudatus* 207f.
— *quintus* n. sp. in *Metachirus nudicaudatus* 207f.
— *sextus* n. sp. in *Metachirus nudicaudatus* 207f.
Treatment, ancylostomiasis 305a.
—, *Ascaridia* 732g.
—, *Dictyocaulus* 732bx, 732cz.
—, dog & cat helminths 491a.
—, elephantiasis 304b.
—, enterobiasis 345b, 411a, 597a, 714.
—, equine helminthiasis 498a.
—, fasciolopsiasis 90i.
—, helminthiasis 588a, 713.
—, hookworm anaemia 63a.
—, "Hoose" 389d.
—, horse nematodes 732bo.
—, "Husk" 672c.
—, liver-fluke disease 524a.
—, lymphangitis 285c.
Treatment, ocular sparganosis 420b, 437a.
—, *Oesophagostomum columbianum* 195a, 451a.
—, poultry helminthiasis 22a.
—, sheep helminths 27a.
—, stephanofiliariasis 576a.
—, *Taenia saginata* 390a.
—, trichinellosis 412a.
—, trichuriasis 457a.
—, *Trichuris muris* 552b.
Trematode in *Belone strongylura* 604b.
— *Clarias magur* 604b.
— disease in *Acerina cernua* 503c.
— — — mink 497c.
— — — sea-gull 494b.
— in fowl in India 604c.
— — frog, life-history 322j.
— larvae in fishes in Japan 312a.
— life-histories, historical 218a.
— ova, shell formation 124b.
Trematodes in *Acanthocybium solandri* 322j.
— — *Amphiuma tridactylum* 47d.
— from Antarctic 650a.
— in birds 732eb.
— — —, taxonomy 603b.
— — *Branchiostegus japonicus* 157.
— controlled by fishes 115b.
— in fishes 604b.
— — — in Mediterranean 281a.
— — frogs in China 38a.
— — *Hyborhynchus notatus* 413b.
—, morphology 322j.
—, pathology 710, 732...
— in *Rana cyanophlyctis* 603g.
— — reptiles 479a.
— — *Silundia gangetica* 604c.
—, taxonomy 604b.
—, technique for mounting 657a.
Triacnophorus crassus, life-history 114 l.
— *nodulosus* in *Coregonus warreni* 69a.
Tribolium ferrugineum, intermediary for *Hymenolepis diminuta* 139b.
Trichinella in animals in Hawaii 322j.
— — birds, experimental infection 167g.
— — *Chaetophractus villosus*, experimental infection 224a.
—, diagnostic technique 43b.
— in dog, age immunity 140b.
— — —, location 1j, 609a.
—, experimental infections 167h, 322j.
—, fecundity 149a.
— in fishes, experimental infections 470a.
— — fur-bearing animals 497a.
— & haematology of rabbit 319a.
—, immunity 167i, 322j.
—, intradermal test 243a.
— larvae, artificial excystment 318a.
— —, bionomics 322j.
— —, technique for isolating 368d.

INDEX OF SUBJECTS.

- Trichinella* larvae, viability in alcohol 219a.
 —, life-history 70b.
 — in pig, pre-natal infection 368c.
 — rabbit, Biernacki reaction 612b.
 — rat, experimental infections 322j.
 —, pre-natal infections 219b.
 — reviewed 67c.
 — *spiralis*, immunity 37a.
 — in pig, precipitin reaction 519a.
Trichinellosis in cat 90c.
 —, diagnosis 464a.
 —, general account 286b.
 — in Hawaii 664a.
 —, immunology 121a.
 — in laboratory animals, diagnosis 694.
 — man rd, 30a, 53a, 317a, 370b, 383a, 672e.
 —, antimony 296c.
 — in Australia 118a.
 — Britain 279a, 279b.
 —, control 222a.
 — in Italy 616a.
 — Sweden 659a, 659b.
 — U.S.A. 131a, 131b, 131c, 193a, 255a, 260a.
 —, neural, in man 172a.
 — in pig in Argentine 630a.
 —, control 222a.
 — rat, irradiation 412a.
Trichohelicinae n. subf. 568a.
Trichoskrjabinia malayana n. comb. 732ej.
Trichostrongylidae revised 568a.
Trichostrongylids in reindeer 732dk.
Trichostrongylosis in cattle 672d.
 — ruminants 367b.
 — sheep 322j.
 — in Australia 525a.
 —, copper sulphate & lysol 732dw.
Trichostrongylus axei, bionomics 322j.
 — in cattle in Japan 528a.
 — equines in Panama 322j.
 — man in Mauritius 341b.
colubriformis 39a.
orientalis 530d.
ransoni n. sp. in rabbit 116b.
retortaeformis in goat 389f.
texianus n. sp. in *Cynomys ludovicianus* 116b.
Trichuriasis in man 556b, 637a.
 —, citrate of iron & ammonium 443a.
 —, treatment 457a.
Trichuris in dog, santonin 184a.
 — man 548b.
 — ruminants 585c.
antidorchii n. sp. 585c.
barbertonensis n. sp. 585c.
muris in mouse, chemotherapy 552b.
parvispiculum n. sp. 585c.
trichiura, bionomics 732v.
 —, egg-shell 732v.
Trichuris trichiura ova, cytology 732u.
 —, viability 552g.
 — in U.S.A. rh.
 —, incidence 732o.
vulpis in dog, haematology 720.
Trimeresurus trigonocephalus, *Protocephalus* (*Ophiotaenia*) n. sp. in 485a.
Tringa sp., *Choanotaenia* n. sp. in 87b.
 Trinidad, feline helminths 16a.
Triturus larvae, 2nd intermediaries for *Bothriocephalus rarus* 114b.
 — *viridescens*, *Bothriocephalus* n. sp. in 114a.
Trogloremma acutum, new hosts 371d.
 Tropical medicine 48a.
Tropidonotus piscator, *Proalarioides* n. sp. in 261d.
Tropisurus fissispinus, life-history 528d, 535a.
 Trout, brown, *Cystidicola farionis* in 263b.
 —, *Mazocraes sagittatum* n. comb. in 263b.
 —, rainbow, *Diplostomum volvolus* in 574a.
Tugumaea to *Chiorchis* 170a.
 "Tukemono" transmitting helminth ova 31a, 198a.
 Tulip, *Anguillulina dipsaci* in 217c.
 Tunis, human ancylostomiasis 86c.
Turbatrix aceti, cytology 427a.
 Turkey, *Plagiorchis loricola* disease in 29d.
 —, helminths in 388b.
 —, *Syngamus trachea* in 346a.
Tylenchorhynchus claytoni n. sp. in tobacco 470.
Uncinaria longispicula to *U. longespiculum* 341a.
 — *philippinensis* to *U. longespiculum* 341a.
 U.S.A., ancylostomiasis 254a.
 —, *Ascaris lumbricoides* rh.
 —, bird helminths 413c.
 —, cercariae in snails 322j.
 —, *Cysticercus bovis* 732dn.
 —, *Dirofilaria immitis* 322j.
 —, domestic animal helminthiasis 105a.
 —, enterobiasis 322j, 353a, 550a.
 —, hare helminths 322j.
 —, *Heterodera marioni* 216a.
 —, human ancylostomiasis 86a.
 —, cestodes 163a.
 —, helminths 114c, 527a.
 —, trichinellosis 131a, 131b, 131c, 193a.
 —, *Hymenolepis nana* rh.
 —, *Metorchis albidus* 60f.
 —, salamander helminths 32b, 299a.

INDEX OF SUBJECTS.

U.S.A., sparganosis 322g.
 ———, *Syngamus trachea* 346a.
 ———, trichinellosis 255a, 260a.
 ———, *Trichuris trichiura* 1h, 732o.

Vagrifilaria columbigallinae n. g., n. sp.
 in *Columbigallina passerina* 144b.
 ——— larvae, bionomics 144c.
Varanus sp., *Dracunculus* sp. in 603a.
 Venezuela, human helminths 276a.
 Vertebrates, helminths in 591b.
Vespa vulgaris, mermithid in 300a,
 608a.
Vesperugidendrium indicum n. g., n. sp.
 in *Vesperugo abranus* 169a.
Vesperugo abranus, *Vesperugidendrium*
 n. g., n. sp. in 169a.
Viannata skrjabini n. sp. in *Metachirops*
opossum 732ca.
Viannella argentina n. sp. 207e.
Vicia Faba, *Anguillulina dipsaci* disease
 in 112a.
 Vine, *Heterodera marioni* in 610a.
Viola lutea, nematodes in 582a.
Vitellotrema fusipora in *Farancia abacura*
 212a.
Vulpes lagopus, helminths in 732bv.

Wardius to *Pseudodiscus* 170a.
Waretrema pisicola n. g., n. sp. 604c.
 Waretrematidae n. fam. 604c.
 Waterfowl, *Amidostomum anseris* in
 105d.

Wellcomeia decorata redescribed 563b.
Weryonia longicauda n. sp. 220a.
 West Africa, *Onchocerca volvulus* 79a.
 Wheat, *Anguillulina dipsaci* disease in
 318c.
Wuchereria bancrofti, life-history 57a,
 97e.
 ——— in Mauritius, life-history 61a.
 ———, periodicity 144d, 326b, 380a.

Xennella discussed 454a.
 — *suecica*, male described 454a.
Xenopharynx discussed 604b.
Xenopus laevis, *Alaria* (?) metacercaria
 in 170b.
 ———, *Camallanus* n. sp. in 170b.
 ———, *Cephalochlamys namaquensis* in
 170b.
 ———, *Procamallanus* n. sp. in 170b.

Yam, *Hoplolaimus bradys* disease in
 214b.
 —, *Rotylenchus* n. sp. in 47o.
Yamagutia n. g. 604b.
 Yucatan, human helminths 360a.
 Yugoslavia, *Limnaea truncatula* 542a.
 —, pig helminths 387a.

Zancloerhynchus spinifer, *Echinorhynchus*
 n. sp. in 650b.
Zizania aquatica, 2nd intermediary for
Fasciolopsis 17a.

CORRIGENDA.

Serial
 No.

- 18 (Journal title) For "Comtes" read "Comptes"
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 72a (Title) Line 1 For "Intestina" read "Intestinal"
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